Refine Search

Search Results -

Terms	Documents
6255458.pn.	1

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L11

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Wednesday, December 08, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L11	6255458.pn.	1	L11
L10	6255458.pn.	1	L10
L9	6300129	1	L9
L8	5569825.pn.	1	L8
L7	5789650.pn.	1	L7
L6	5545806.pn.	1	L6
L5	5661016.pn.	1	L5
L4	5814318.pn.	1	L4
L3	5814318.pn	0	L3
L2	5625126.pn.	1	L2
L1	5770429.pn.	1	L1

END OF SEARCH HISTORY

h e b b cg b e e ch

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:02 ; Search time 2155.96 Seconds
(without alignments)
8839.572 Million cell updates/sec

Title: US-08-728-463B-205
Perfect score: 403
Sequence: 1 ATGAAACACCTGTGGTTCTT.....CCTGGTCACCGTCTCCTCAG 403

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 4526729 seqs, 23644849745 residues

Total number of hits satisfying chosen parameters: 9053458

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
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11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	403	100.0	403	6	AR161374	AR161374 Sequence
2	403	100.0	403	6	AR369967	AR369967 Sequence
3	403	100.0	403	6	BD096601	BD096601 Transgeni

4	391.4	97.1	404	6	AR161372	AR161372 Sequence
5	391.4	97.1	404	6	AR369965	AR369965 Sequence
6	391.4	97.1	404	6	BD096599	BD096599 Transgeni
7	383.8	95.2	524	6	AR161428	AR161428 Sequence
8	383.8	95.2	524	6	AR369973	AR369973 Sequence
9	383.8	95.2	524	6	BD096607	BD096607 Transgeni
10	383.8	95.2	4926	6	AR161427	AR161427 Sequence
11	383.8	95.2	4926	6	AR370022	AR370022 Sequence
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34	343.2	85.2	441	9	HSIGHXX22	X65904 H.sapiens m
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ALIGNMENTS

RESULT 1
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LOCUS AR161374 403 bp DNA linear PAT 17-OCT-2001
DEFINITION Sequence 357 from patent US 6255458.
ACCESSION AR161374
VERSION AR161374.1 GI:16227234
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

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REFERENCE   1  (bases 1 to 403)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 357 03-JUL-2001;
FEATURES             Location/Qualifiers
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                     /organism="unknown"
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RESULT 2
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LOCUS       AR369967                 403 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 205 from patent US 6300129.
ACCESSION   AR369967
VERSION     AR369967.1  GI:34606407
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 403)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 205 09-OCT-2001;
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 3.6e-104;
  Matches  403;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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RESULT 3
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LOCUS       BD096601                 403 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
            antibodies.
ACCESSION   BD096601
VERSION     BD096601.1  GI:22642189
KEYWORDS    JP 2001527386-A/128.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 403)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable.of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 128 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
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PN JP 2001527386-A/128
PD 25-DEC-2001
PF 01-DEC-1997 JP 1998525687
PR 02-DEC-1996 US 08/758417
PI NILS LONBERG,ROBERT M KAY
PC C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
Strandedness: Single;
CC Topology: Linear;
CC Transgenic non-human animals capable of
producing heterologous
CC antibodies
FH Key Location/Qualifiers
FT source 1. .403
FT /organism='Unidentified'.

FEATURES Location/Qualifiers
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ORIGIN

Query Match 100.0%; Score 403; DB 6; Length 403;
Best Local Similarity 100.0%; Pred. No. 3.6e-104;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 4
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LOCUS AR161372 404 bp DNA linear PAT 17-OCT-2001

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DEFINITION  Sequence 355 from patent US 6255458.
ACCESSION   AR161372
VERSION     AR161372.1  GI:16227232
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 404)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 355 03-JUL-2001;
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  Matches  392;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

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RESULT 5
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LOCUS       AR369965                 404 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 203 from patent US 6300129.
ACCESSION   AR369965
VERSION     AR369965.1  GI:34606405
KEYWORDS    .
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SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 404)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 203 09-OCT-2001;
FEATURES             Location/Qualifiers
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  Query Match             97.1%;  Score 391.4;  DB 6;  Length 404;
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  Matches  392;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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RESULT 6
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LOCUS       BD096599                 404 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
            antibodies.
ACCESSION   BD096599
VERSION     BD096599.1  GI:22642187
KEYWORDS    JP 2001527386-A/126.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
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REFERENCE   1  (bases 1 to 404)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 126 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
            PN   JP 2001527386-A/126
            PD   25-DEC-2001
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            PR   02-DEC-1996 US    08/758417
            PI   NILS LONBERG,ROBERT M KAY
            PC   C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
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            CC   Topology: Linear;
            CC   Transgenic non-human animals capable of
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            CC            antibodies
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  Best Local Similarity   99.7%;  Pred. No. 7.5e-101;
  Matches  392;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db        252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
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                ||||||||||||||||||||||||||||||||
Db        372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404


RESULT 7
AR161428
LOCUS       AR161428                524 bp    DNA     linear   PAT 17-OCT-2001
DEFINITION  Sequence 419 from patent US 6255458.
ACCESSION   AR161428
VERSION     AR161428.1  GI:16227305
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 524)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 419 03-JUL-2001;
FEATURES             Location/Qualifiers
     source          1. .524
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             95.2%;  Score 383.8;  DB 6;  Length 524;
  Best Local Similarity   97.0%;  Pred. No. 1.1e-98;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| |||||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || ||||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db        253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415
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RESULT 8
AR369973
LOCUS       AR369973                 524 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 219 from patent US 6300129.
ACCESSION   AR369973
VERSION     AR369973.1  GI:34606413
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 524)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 219 09-OCT-2001;
FEATURES             Location/Qualifiers
     source          1. .524
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             95.2%;  Score 383.8;  DB 6;  Length 524;
  Best Local Similarity   97.0%;  Pred. No. 1.1e-98;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || ||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db        253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415


RESULT 9
BD096607
LOCUS       BD096607                 524 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
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            antibodies.
ACCESSION   BD096607
VERSION     BD096607.1  GI:22642195
KEYWORDS    JP 2001527386-A/134.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 524)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 134 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
            PN   JP 2001527386-A/134
            PD   25-DEC-2001
            PF   01-DEC-1997 JP 1998525687
            PR   02-DEC-1996 US    08/758417
            PI   NILS LONBERG,ROBERT M KAY
            PC   C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
            Strandedness: Single;
            CC   Topology: Linear;
            CC   Transgenic non-human animals capable of
            producing heterologous
            CC            antibodies
            FH   Key             Location/Qualifiers
            FT   source          1. .524
            FT                   /organism='Unidentified'.
FEATURES             Location/Qualifiers
     source          1. .524
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
ORIGIN

  Query Match             95.2%;  Score 383.8;  DB 6;  Length 524;
  Best Local Similarity   97.0%;  Pred. No. 1.1e-98;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||!
Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| |||||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||||||||  |||||||||||||| |||||||||||||||||||||||||||||||||||
Db        193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||  |||||||||||||||||||||||| |||||||||||||||||||| |||||
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Db        253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415


RESULT 10
AR161427
LOCUS       AR161427                4926 bp    DNA     linear   PAT 17-OCT-2001
DEFINITION  Sequence 418 from patent US 6255458.
ACCESSION   AR161427
VERSION     AR161427.1  GI:16227303
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 4926)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 418 03-JUL-2001;
FEATURES             Location/Qualifiers
     source          1. .4926
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             95.2%;  Score 383.8;  DB 6;  Length 4926;
  Best Local Similarity   97.0%;  Pred. No. 1.1e-98;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
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Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430


RESULT 11
AR370022
LOCUS       AR370022                4926 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 268 from patent US 6300129.
ACCESSION   AR370022
VERSION     AR370022.1  GI:34606462
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 4926)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 268 09-OCT-2001;
FEATURES             Location/Qualifiers
     source          1. .4926
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             95.2%;  Score 383.8;  DB 6;  Length 4926;
  Best Local Similarity   97.0%;  Pred. No. 1.1e-98;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
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Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430


RESULT 12
BD096656
LOCUS       BD096656                4926 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
            antibodies.
ACCESSION   BD096656
VERSION     BD096656.1  GI:22642244
KEYWORDS    JP 2001527386-A/183.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 4926)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 183 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
            PN   JP 2001527386-A/183
            PD   25-DEC-2001
            PF   01-DEC-1997 JP 1998525687
            PR   02-DEC-1996 US    08/758417
            PI   NILS LONBERG,ROBERT M KAY
            PC   C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
            Strandedness: Single;
            CC   Topology: Linear;
            CC   Transgenic non-human animals capable of
            producing heterologous
            CC            antibodies
            FH   Key             Location/Qualifiers
            FT   source          1. .4926
            FT                   /organism='Unidentified'.
FEATURES             Location/Qualifiers
     source          1. .4926
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
ORIGIN

  Query Match             95.2%;  Score 383.8;  DB 6;  Length 4926;
  Best Local Similarity   97.0%;  Pred. No. 1.1e-98;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| |||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||||||||.|||||||||||||| |||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || ||||||||||||||||||||||||| |||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430
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RESULT 13
AF062158
LOCUS       AF062158                 417 bp    mRNA    linear   PRI 08-MAY-2001
DEFINITION  Homo sapiens clone 45u-33 immunoglobulin heavy chain variable
            region (IGH) mRNA, partial cds.
ACCESSION   AF062158
VERSION     AF062158.1  GI:3170778
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 417)
  AUTHORS   Wang,X. and Stollar,B.D.
  TITLE     Immunoglobulin VH gene expression in human aging
  JOURNAL   Clin. Immunol. 93 (2), 132-142 (1999)
  MEDLINE   99459182
   PUBMED   10527689
REFERENCE   2  (bases 1 to 417)
  AUTHORS   Wang,X. and Stollar,B.D.
  TITLE     Direct Submission
  JOURNAL   Submitted (22-APR-1998) Biochemistry Department, Tufts University
            School of Medicine, 136 Harrison Ave., Boston, MA 02111, USA
FEATURES             Location/Qualifiers
     source          1. .417
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /chromosome="14"
                     /map="14q32.33"
                     /clone="45u-33"
                     /cell_type="peripheral B lymphocyte"
                     /tissue_type="blood"
                     /note="from elderly repertoire 45u"
     gene            1. .>417
                     /gene="IGH"
     CDS             1. .>417
                     /gene="IGH"
                     /codon_start=1
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                     /product="immunoglobulin heavy chain variable region"
                     /protein_id="AAC18194.1"
                     /db_xref="GI:3170779"
                     /translation="MKHLWFFLLLVAAPRWVLSQVQLQQWGAGLLKPSETLSLTCAVY
                     GGSFSGYYWSWIRQPPGKGLEWIGEINHSGSTNYNPSLKSRVTISVDTSKNQFSLKLS
                     SVTAADTAVYYCARVIQWPILGIDYWGQGTLVTVSSG"
     sig_peptide     1. .57
                     /gene="IGH"
     V_region        58. .>417
                     /gene="IGH"
ORIGIN

  Query Match             90.6%;  Score 365;  DB 9;  Length 417;
  Best Local Similarity   94.7%;  Pred. No. 2.7e-93;
  Matches  393;  Conservative    0;  Mismatches   10;  Indels   12;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATT-- 358
              |||||||||||||||||||||||||||||||||||||||||||||||||| ||   | |
Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTATACAGTGG 360

Qy        359 ----------GGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                         || | |||  ||||||||||||||||||||||||||||||||||
Db        361 CCAATCCTGGGGATTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415


RESULT 14
AF062101
LOCUS       AF062101                 420 bp    mRNA    linear   PRI 08-MAY-2001
DEFINITION  Homo sapiens clone 21u-6 immunoglobulin heavy chain variable region
            (IGH) mRNA, partial cds.
ACCESSION   AF062101
VERSION     AF062101.1  GI:3170664
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
```

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REFERENCE   1  (bases 1 to 420)
  AUTHORS   Wang,X. and Stollar,B.D.
  TITLE     Immunoglobulin VH gene expression in human aging
  JOURNAL   Clin. Immunol. 93 (2), 132-142 (1999)
  MEDLINE   99459182
   PUBMED   10527689
REFERENCE   2  (bases 1 to 420)
  AUTHORS   Wang,X. and Stollar,B.D.
  TITLE     Direct Submission
  JOURNAL   Submitted (22-APR-1998) Biochemistry Department, Tufts University
            School of Medicine, 136 Harrison Ave., Boston, MA 02111, USA
FEATURES             Location/Qualifiers
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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        350 ----TAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db        361 TTATTCCCTGGCGGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 418
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LOCUS       HST22X18                411 bp    mRNA    linear   PRI 30-APR-1997
DEFINITION  H.sapiens mRNA for Ig heavy chain variable region (VH4DJ) (clone
            T22.18).
ACCESSION   Z75392
VERSION     Z75392.1  GI:2062055
KEYWORDS    immunoglobulin; immunoglobulin heavy chain; immunoglobulin
            superfamily; variable region.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 411)
  AUTHORS   Tonnelle,C., D'Ercole,C., Depraetere,V., Metras,D., Boubli,L. and
            Fougereau,M.
  TITLE     Human thymic B cells largely overexpress the VH4 Ig gene family. A
            possible role in the control of tolerance in situ?
  JOURNAL   Int. Immunol. 9 (3), 407-414 (1997)
  MEDLINE   97244170
   PUBMED   9088979
REFERENCE   2  (bases 1 to 411)
  AUTHORS   Tonnelle,C.
  TITLE     Direct Submission
  JOURNAL   Submitted (26-JUN-1996) Cecile Tonnelle, Centre d'Immunologie
            Marseille Luminy, Marseille, 13288, France
FEATURES             Location/Qualifiers
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ORIGIN

  Query Match             90.0%;  Score 362.8;  DB 9;  Length 411;
  Best Local Similarity   94.9%;  Pred. No. 1.1e-92;
  Matches  389;  Conservative    0;  Mismatches   12;  Indels    9;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Search completed: December  2, 2004, 17:01:02
Job time : 2158.96 secs

                          GenCore version 5.1.6
                 Copyright (c) 1993 - 2004  Compugen Ltd.


OM nucleic - nucleic search, using sw model

Run on:         December  2, 2004, 12:19:02 ; Search time 312.035 Seconds
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Title:          US-08-728-463B-205
Perfect score:  403
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Scoring table:  IDENTITY_NUC
                Gapop 10.0 , Gapext 1.0
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Searched: 4134886 seqs, 2624710521 residues

Total number of hits satisfying chosen parameters: 8269772

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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1: geneseqn1980s:*
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4: geneseqn2001as:*
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9: geneseqn2003bs:*
10: geneseqn2003cs:*
11: geneseqn2003ds:*
12: geneseqn2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	403	100.0	403	2	AAT73440	Aat73440 Human imm
2	403	100.0	403	2	AAV39238	Aav39238 Functiona
3	391.4	97.1	404	2	AAT73438	Aat73438 Human imm
4	391.4	97.1	404	2	AAV39236	Aav39236 Functiona
5	391.4	97.1	404	2	AAZ21990	Aaz21990 Partial n
6	389	96.5	401	2	AAZ21992	Aaz21992 Partial n
7	383.8	95.2	524	2	AAT73444	Aat73444 Human imm
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10	383.8	95.2	4926	2	AAV39291	Aav39291 Plasmid p
11	383.8	95.2	4926	2	AAZ22045	Aaz22045 Nucleotid
12	357.8	88.8	417	3	AAA52907	Aaa52907 Human LH1
13	357.8	88.8	417	8	ACC58850	Acc58850 Tumour-sp
14	357.8	88.8	417	10	AAD64349	Aad64349 Human mon
15	353.4	87.7	1507	3	AAA09695	Aaa09695 Human imm
16	345	85.6	462	8	ABZ80006	Abz80006 Human ant
17	344	85.4	426	8	ABZ80001	Abz80001 Anti-hTNF
18	339.4	84.2	7528	4	AAF30316	Aaf30316 Bicistron
19	335.6	83.3	413	2	AAT73434	Aat73434 Human imm
20	335.6	83.3	413	2	AAV39232	Aav39232 Functiona
21	335.6	83.3	413	2	AAZ21986	Aaz21986 Partial n
22	332	82.4	1341	8	ABX15393	Abx15393 Human IgG
23	332	82.4	2674	8	ABX15391	Abx15391 Human IgG

24	330.4	82.0	1341	10	AAD59474	Aad59474 IgG3 anti
25	330.4	82.0	2674	10	AAD59472	Aad59472 RecPolRhD
26	327.8	81.3	1746	3	AAA27382	Aaa27382 Human IGF
27	324.8	80.6	496	2	AAZ24416	Aaz24416 Human bla
28	323.6	80.3	481	8	ABT31871	Abt31871 Anti-CD40
29	321.8	79.9	360	12	ADQ21998	Adq21998 Human sof
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34	319.8	79.4	822	6	ABX00208	Abx00208 DNA encod
35	319.8	79.4	822	6	ABK71414	Abk71414 DNA encod
36	319	79.2	1401	10	ADE28478	Ade28478 Human ant
37	315.8	78.4	1401	10	ADE28470	Ade28470 Human ant
38	312	77.4	417	3	AAA13938	Aaa13938 Human PTH
39	309	76.7	629	6	ABQ56276	Abq56276 Human ova
40	308.4	76.5	467	10	ABZ59692	Abz59692 Anti-TRAI
41	308	76.4	348	2	AAQ42697	Aaq42697 Vh 71-4.
42	308	76.4	348	2	AAQ42700	Aaq42700 VH415. 3/
43	308	76.4	348	2	AAQ42699	Aaq42699 VH411. 3/
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ALIGNMENTS

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ID   AAT73440 standard; DNA; 403 BP.
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AC   AAT73440;
XX
DT   03-DEC-1997  (first entry)
XX
DE   Human immunoglobulin light chain variable region partial transcript.
XX
KW   Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW   transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW   transplant rejection; ss.
XX
OS   Homo sapiens.
XX
PN   WO9713852-A1.
XX
PD   17-APR-1997.
XX
PF   10-OCT-1996;   96WO-US016433.
XX
PR   10-OCT-1995;   95US-00544404.
XX
PA   (GENP-) GENPHARM INT INC.
XX
PI   Lonberg N,  Kay RM;
XX
DR   WPI; 1997-235888/21.
XX
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PT Novel anti-CD4 antibody produced by transgenic mice - used in the
PT treatment of auto-immune disease etc.
XX
PS Claim 44; Page 255; 396pp; English.
XX
CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, 10C5 gamma, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes
XX
SQ Sequence 403 BP; 82 A; 118 C; 114 G; 89 T; 0 U; 0 Other;

Query Match 100.0%; Score 403; DB 2; Length 403;
Best Local Similarity 100.0%; Pred. No. 6.8e-104;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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RESULT 2
AAV39238

ID AAV39238 standard; DNA; 403 BP.
XX
AC AAV39238;
XX
DT 18-DEC-1998 (first entry)
XX
DE Functional gamma transcript isolated from transgenic cell line 10C5.
XX
KW Transgenic animal; human heterologous antibody; transgene;
KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW autoimmune reaction; inflammatory response; transplant rejection;
KW acid induced lung injury; acute adult respiratory distress syndrome;
KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW cystic fibrosis; ss.
XX
OS Synthetic.
OS Homo sapiens.
OS Mus sp.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 41; Page 303-304; 452pp; English.
XX
CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
CC antibody. The sequences are isolated from 5 different transgenic mouse
CC hybridoma cell lines. The specification describes transgenic non-human
CC animals, especially a mouse, which are capable of producing a human
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. The transgenic animals have human heavy and light chain
CC transgenes. The transgenes are capable of functionally rearranging a
CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
CC recombination. The transgenes include a heavy chain transgene comprising
CC at least one V, D and J gene segment, and one constant region gene
CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
CC one V and J gene segment and one constant region gene segment. The gene
CC segments are heterologous to the transgenic animal. The antibody can be
CC used to prevent efflux of neutrophils from vasculature. It can also be
CC used to treat reperfusion injury. CD4 binding antibodies are used to
CC reduce undesirable autoimmune reactions, inflammatory responses and
CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC tissue damage and prolong survival in animal models of acute adult
CC respiratory distress syndrome (ARDS) and acid induced lung injury. The

```
CC   anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC   septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
XX
SQ   Sequence 403 BP; 82 A; 118 C; 114 G; 89 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 403;  DB 2;  Length 403;
  Best Local Similarity   100.0%;  Pred. No. 6.8e-104;
  Matches  403;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

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              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360

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RESULT 3
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ID   AAT73438 standard; DNA; 404 BP.
XX
AC   AAT73438;
XX
DT   03-DEC-1997  (first entry)
XX
DE   Human immunoglobulin light chain variable region partial transcript.
XX
KW   Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW   transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW   transplant rejection; ss.
XX
OS   Homo sapiens.
XX
PN   WO9713852-A1.
XX
PD   17-APR-1997.
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XX
PF 10-OCT-1996; 96WO-US016433.
XX
PR 10-OCT-1995; 95US-00544404.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1997-235888/21.
XX
PT Novel anti-CD4 antibody produced by transgenic mice - used in the
PT treatment of auto-immune disease etc.
XX
PS Claim 44; Page 254-255; 396pp; English.
XX
CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, 6G5 gamma, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes
XX
SQ Sequence 404 BP; 87 A; 117 C; 113 G; 87 T; 0 U; 0 Other;

Query Match 97.1%; Score 391.4; DB 2; Length 404;
Best Local Similarity 99.7%; Pred. No. 1.3e-100;
Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
              |||||||||||||||||||||||||||||||
Db        372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404
```

RESULT 4
AAV39236
ID AAV39236 standard; DNA; 404 BP.
XX
AC AAV39236;
XX
DT 18-DEC-1998 (first entry)
XX
DE Functional gamma transcript isolated from transgenic cell line 6G5.
XX
KW Transgenic animal; human heterologous antibody; transgene;
KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW autoimmune reaction; inflammatory response; transplant rejection;
KW acid induced lung injury; acute adult respiratory distress syndrome;
KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW cystic fibrosis; ss.
XX
OS Synthetic.
OS Homo sapiens.
OS Mus sp.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 41; Page 303; 452pp; English.
XX
CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
CC antibody. The sequences are isolated from 5 different transgenic mouse
CC hybridoma cell lines. The specification describes transgenic non-human
CC animals, especially a mouse, which are capable of producing a human
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. The transgenic animals have human heavy and light chain
CC transgenes. The transgenes are capable of functionally rearranging a
CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)

CC recombination. The transgenes include a heavy chain transgene comprising
CC at least one V, D and J gene segment, and one constant region gene
CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
CC one V and J gene segment and one constant region gene segment. The gene
CC segments are heterologous to the transgenic animal. The antibody can be
CC used to prevent efflux of neutrophils from vasculature. It can also be
CC used to treat reperfusion injury. CD4 binding antibodies are used to
CC reduce undesirable autoimmune reactions, inflammatory responses and
CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC tissue damage and prolong survival in animal models of acute adult
CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
XX
SQ Sequence 404 BP; 87 A; 117 C; 113 G; 87 T; 0 U; 0 Other;

Query Match 97.1%; Score 391.4; DB 2; Length 404;
Best Local Similarity 99.7%; Pred. No. 1.3e-100;
Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
              |||||||||||||||||||||||||||||||
Db        372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404
```

RESULT 5
AAZ21990
ID AAZ21990 standard; DNA; 404 BP.
XX
AC AAZ21990;
XX
DT 24-NOV-1999 (first entry)
XX

DE Partial nucleotide sequence for a functional transcript 6G5-gamma.
XX
KW Transgenic animal; heterologous antibody; hybridoma; B cell;
KW transgenic mouse; human heavy chain transgene; digoxin; PCR primer;
KW human light chain transgene; immortalized cell; immunoglobulin;
KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9945962-A1.
XX
PD 16-SEP-1999.
XX
PF 12-MAR-1999; 99WO-US005535.
XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;
XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 41; Page 304; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated form a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence represents a partial
CC nucleotide sequence for a functional transcript used in the course of the
CC invention
XX
SQ Sequence 404 BP; 87 A; 117 C; 113 G; 87 T; 0 U; 0 Other;

Query Match 97.1%; Score 391.4; DB 2; Length 404;
Best Local Similarity 99.7%; Pred. No. 1.3e-100;
Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy         121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy         181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 251

Qy         241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311

Qy         301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy         361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
                |||||||||||||||||||||||||||||||
Db         372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404
```

RESULT 6
AAZ21992
ID AAZ21992 standard; DNA; 401 BP.
XX
AC AAZ21992;
XX
DT 24-NOV-1999 (first entry)
XX
DE Partial nucleotide sequence for a functional transcript 10C5-gamma.
XX
KW Transgenic animal; heterologous antibody; hybridoma; B cell;
KW transgenic mouse; human heavy chain transgene; digoxin; PCR primer;
KW human light chain transgene; immortalized cell; immunoglobulin;
KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9945962-A1.
XX
PD 16-SEP-1999.
XX
PF 12-MAR-1999; 99WO-US005535.
XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;
XX
DR WPI; 1999-551219/46.
XX

PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 41; Page 304-305; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated form a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence represents a partial
CC nucleotide sequence for a functional transcript used in the course of the
CC invention
XX
SQ Sequence 401 BP; 82 A; 116 C; 114 G; 89 T; 0 U; 0 Other;

Query Match 96.5%; Score 389; DB 2; Length 401;
Best Local Similarity 99.5%; Pred. No. 6.2e-100;
Matches 401; Conservative 0; Mismatches 0; Indels 2; Gaps 1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||  ||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGT--TGTCCCAG 58

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         59 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 118

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        119 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 178

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        179 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 238

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        239 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 298

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        299 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 358

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||||||||||||||||||||||||||||||||||||||
Db        359 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 401
```

RESULT 7

AAT73444
ID AAT73444 standard; DNA; 524 BP.
XX
AC AAT73444;
XX
DT 03-DEC-1997 (first entry)
XX
DE Human immunoglobulin light chain variable region partial transcript.
XX
KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW transplant rejection; ss.
XX
OS Homo sapiens.
XX
PN WO9713852-A1.
XX
PD 17-APR-1997.
XX
PF 10-OCT-1996; 96WO-US016433.
XX
PR 10-OCT-1995; 95US-00544404.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1997-235888/21.
XX
PT Novel anti-CD4 antibody produced by transgenic mice - used in the
PT treatment of auto-immune disease etc.
XX
PS Claim 45; Page 272; 396pp; English.
XX
CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, HC6G5, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes
XX
SQ Sequence 524 BP; 106 A; 160 C; 140 G; 118 T; 0 U; 0 Other;

  Query Match   95.2%; Score 383.8; DB 2; Length 524;
  Best Local Similarity 97.0%; Pred. No. 2e-98;
  Matches 391; Conservative   0; Mismatches   12; Indels   0; Gaps   0;

Qy   1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||

```
Db          13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy          61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy         121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
               |||||||||||||||| |||||||||||||||||||||||||||||||||||| |||
Db         133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy         181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
               |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||||
Db         193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy         241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
               || |||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db         253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy         301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
               |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db         313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy         361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
               |||||||| |||||||||||||||||||||||||||||||||
Db         373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415
```

```
RESULT 8
AAV39292
ID   AAV39292 standard; DNA; 524 BP.
XX
AC   AAV39292;
XX
DT   18-DEC-1998  (first entry)
XX
DE   Synthetic heavy chain sequence HC6G5.
XX
KW   Transgenic animal; human heterologous antibody; transgene;
KW   isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW   autoimmune reaction; inflammatory response; transplant rejection;
KW   acid induced lung injury; acute adult respiratory distress syndrome;
KW   ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW   cystic fibrosis; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9824884-A1.
XX
PD   11-JUN-1998.
XX
PF   01-DEC-1997;   97WO-US021803.
XX
PR   02-DEC-1996;   96US-00758417.
XX
PA   (GENP-) GENPHARM INT.
XX
```

PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 42; Page 324; 452pp; English.
XX
CC The present sequence represents a synthetic heavy sequence (created using
CC oligonucleotides AAV39279-89). This synthetic sequence differs from
CC natural sequences in that strings of repeated oligonucleotides are
CC interrupted (to facilitate oligonucleotide synthesis and PCR
CC amplification), optimal translation initiation sites are incorporated and
CC HindII sites were engineered upstream of the translation initiation
CC sites. The sequence is used to make plasmid pHC6G5, which is used in the
CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,
CC in the transgenic mouse of the invention. The specification describes
CC transgenic non-human animals, especially a mouse, which are capable of
CC producing a human heterologous antibodies of multiple isotypes by
CC undergoing isotype switching. The transgenic animals have human heavy and
CC light chain transgenes. The transgenes are capable of functionally
CC rearranging a heterologous diversity (D) gene in a variable-diversity-
CC junction (V-D-J) recombination. The transgenes include a heavy chain
CC transgene comprising at least one V, D and J gene segment, and one
CC constant region gene segment. The immunoglobulin (Ig) light chain
CC transgene comprises at least one V and J gene segment and one constant
CC region gene segment. The gene segments are heterologous to the transgenic
CC animal. The antibody can be used to prevent efflux of neutrophils from
CC vasculature. It can also be used to treat reperfusion injury. CD4 binding
CC antibodies are used to reduce undesirable autoimmune reactions,
CC inflammatory responses and rejection of transplanted organs. The anti-IL-
CC 8 antibodies can reduce tissue damage and prolong survival in animal
CC models of acute adult respiratory distress syndrome (ARDS) and acid
CC induced lung injury. The anti-IL-8 antibodies can also be used for the
CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
CC and cystic fibrosis
XX
SQ Sequence 524 BP; 106 A; 160 C; 140 G; 118 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 524;
Best Local Similarity 97.0%; Pred. No. 2e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||| |||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| |||||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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                ||||||||  ||||||||||||||  ||||||||||||||||||||||||||||||||||||
Db          193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy          241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
                ||  ||||||||||||||||||||||||||  ||||||||||||||||||||||  |||||
Db          253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy          301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
                ||||||||||||||||  ||||||||||||||||||||||||||||||||||||||||||
Db          313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy          361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                ||||||||  ||||||||||||||||||||||||||||||||
Db          373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415
```

```
RESULT 9
AAZ22046
ID   AAZ22046 standard; DNA; 524 BP.
XX
AC   AAZ22046;
XX
DT   24-NOV-1999  (first entry)
XX
DE   Nucleotide sequence of HC6G5.
XX
KW   Transgenic animal; heterologous antibody; hybridoma; B cell;
KW   transgenic mouse; human heavy chain transgene; digoxin;
KW   human light chain transgene; immortalized cell; immunoglobulin;
KW   Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW   transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS   Synthetic.
XX
PN   WO9945962-A1.
XX
PD   16-SEP-1999.
XX
PF   12-MAR-1999;   99WO-US005535.
XX
PR   13-MAR-1998;   98US-00042353.
XX
PA   (GENP-) GENPHARM INT INC.
XX
PI   Lonberg N,  Fishwild DM,  Ball WJ;
XX
DR   WPI; 1999-551219/46.
XX
PT   Novel transgenic non-human animals used to produce heterologous
PT   antibodies.
XX
PS   Example 42; Page 325; 484pp; English.
XX
CC   The specification describes transgenic animals that are capable of
CC   producing a heterologous antibody. The antibodies are isolated form a
CC   hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC   having a genome comprising a human heavy chain transgene and a human
```

CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence is used in the course
CC of the invention
XX
SQ Sequence 524 BP; 106 A; 160 C; 140 G; 118 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 524;
Best Local Similarity 97.0%; Pred. No. 2e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||| |||||
Db        253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415
```

RESULT 10
AAV39291
ID AAV39291 standard; DNA; 4926 BP.
XX
AC AAV39291;
XX
DT 18-DEC-1998 (first entry)
XX
DE Plasmid pHC6G5 nucleotide sequence.
XX
KW Transgenic animal; human heterologous antibody; transgene;

KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW autoimmune reaction; inflammatory response; transplant rejection;
KW acid induced lung injury; acute adult respiratory distress syndrome;
KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW cystic fibrosis; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 42; Page 321-324; 452pp; English.
XX
CC The present sequence represents a plasmid, pHC6G5, which contains a
CC synthetic heavy sequence (created using oligonucleotide AAV39267-89).
CC This synthetic sequence differs from natural sequences in that strings of
CC repeated oligonucleotides are interrupted (to facilitate oligonucleotide
CC synthesis and PCR amplification), optimal translation initiation sites
CC are incorporated and HindII sites were engineered upstream of the
CC translation initiation sites. The plasmid is used in the construction of
CC minigenes for expression of IgGkappa anti-CD4 antibodies, in the
CC transgenic mouse of the invention. The specification describes transgenic
CC non-human animals, especially a mouse, which are capable of producing a
CC human heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. The transgenic animals have human heavy and light chain
CC transgenes. The transgenes are capable of functionally rearranging a
CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
CC recombination. The transgenes include a heavy chain transgene comprising
CC at least one V, D and J gene segment, and one constant region gene
CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
CC one V and J gene segment and one constant region gene segment. The gene
CC segments are heterologous to the transgenic animal. The antibody can be
CC used to prevent efflux of neutrophils from vasculature. It can also be
CC used to treat reperfusion injury. CD4 binding antibodies are used to
CC reduce undesirable autoimmune reactions, inflammatory responses and
CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC tissue damage and prolong survival in animal models of acute adult
CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
XX
SQ Sequence 4926 BP; 1121 A; 1455 C; 1296 G; 1054 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 4926;
Best Local Similarity 97.0%; Pred. No. 3.6e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||||||||||||||||||||||||||||||||||| |||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| ||||||||||||||||||||||||||||||||||
Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430
```

RESULT 11
AAZ22045
ID AAZ22045 standard; DNA; 4926 BP.
XX
AC AAZ22045;
XX
DT 24-NOV-1999 (first entry)
XX
DE Nucleotide sequence of plasmid pHC6G5.
XX
KW Transgenic animal; heterologous antibody; hybridoma; B cell;
KW transgenic mouse; human heavy chain transgene; digoxin;
KW human light chain transgene; immortalized cell; immunoglobulin;
KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS Synthetic.
XX
PN WO9945962-A1.
XX
PD 16-SEP-1999.
XX
PF 12-MAR-1999; 99WO-US005535.

XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;
XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 42; Page 322-325; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated form a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence is used in the course
CC of the invention
XX
SQ Sequence 4926 BP; 1121 A; 1455 C; 1296 G; 1054 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 4926;
Best Local Similarity 97.0%; Pred. No. 3.6e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||||||||||||||||||||||||||||||||||||| |||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| |||||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| |||||||||||||| |||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
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```
Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              ||||||||  ||||||||||||||||||||||||||||||||
Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430


RESULT 12
AAA52907
ID   AAA52907 standard; cDNA; 417 BP.
XX
AC   AAA52907;
XX
DT   20-SEP-2000  (first entry)
XX
DE   Human LH11238 monoclonal antibody heavy chain variable region cDNA.
XX
KW   Human; LH11238 monoclonal antibody; hybridoma; tumour-specific; cancer;
KW   cytostatic; cytotoxic; heavy chain variable region; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .417
FT                   /*tag=  a
FT                   /partial
FT                   /product= "LH11238 antibody heavy chain variable region"
FT   sig_peptide     1. .57
FT                   /*tag=  b
FT   mat_peptide     58. .414
FT                   /*tag=  c
XX
PN   WO200032635-A2.
XX
PD   08-JUN-2000.
XX
PF   01-DEC-1999;   99WO-US028485.
XX
PR   02-DEC-1998;   98US-00203768.
XX
PA   (IXSY-) IXSYS INC.
XX
PI   Watkins JD,  Huse WD;
XX
DR   WPI; 2000-412293/35.
DR   P-PSDB; AAY99556.
XX
PT   New tumor-specific human monoclonal antibody, useful for the treatment
PT   and diagnosis of cancer, comprises at least one complementarity
PT   determining region.
XX
PS   Claim 7; Page 78-79; 84pp; English.
XX
CC   The present sequence encodes the heavy chain variable region of a human
CC   tumour-specific monoclonal antibody. Neoplastic cells selectively express
CC   antigens which are not present on normal cells. Thus monoclonal
CC   antibodies can be produced that are specifically directed against tumour-
```

```
CC   specific antigens. The antibodies can be conjugated to cytotoxic or
CC   cytostatic agents and used to selectively target cancer cells for the
CC   elimination of tumours. They can also be linked to diagnostic moieties
CC   that allow the imaging of neoplastic cells. Nucleic acids encoding human
CC   tumour-specific monoclonal antibodies can be used to express the
CC   antibodies and can be recombinantly engineered to produced modified
CC   antibodies with higher affinity or higher selectivity for tumour cells.
CC   Tumour-specific antibodies were produced by hybridomas that were
CC   generated by in vitro immunisation of human spleen cell cultures with
CC   breast carcinoma cells. The nucleic acid encoding the monoclonal antibody
CC   was then isolated from the hybridoma by RT-PCR. The present sequence
CC   encodes a human monoclonal antibody heavy chain variable region which was
CC   produced by LH11238 hybridoma cell line
XX
SQ   Sequence 417 BP; 88 A; 123 C; 116 G; 90 T; 0 U; 0 Other;

  Query Match             88.8%;  Score 357.8;  DB 3;  Length 417;
  Best Local Similarity   93.5%;  Pred. No. 4.1e-91;
  Matches  390;  Conservative    0;  Mismatches   12;  Indels   15;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT------- 353
              |||||||||||||||||||||||||||||||||||||||||||||||||| |||
Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy        354 --------TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                      |  || |||  ||||||||||||||||||||||||||||||||||
Db        361 CGTCCTCACCGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417


RESULT 13
ACC58850
ID   ACC58850 standard; cDNA; 417 BP.
XX
AC   ACC58850;
XX
DT   08-SEP-2003  (first entry)
XX
```

DE Tumour-specific human monoclonal antibody LH11238 VH coding region.
XX
KW Human; monoclonal antibody; antibody; LH11238; breast cancer;
KW ovarian cancer; antitumour; therapy; diagnosis; gene; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 1. .417
FT /*tag= a
FT /partial
FT /product= "LH11238 VH"
FT /note= "No stop codon"
XX
PN WO2003044036-A1.
XX
PD 30-MAY-2003.
XX
PF 19-NOV-2002; 2002WO-US037134.
XX
PR 19-NOV-2001; 2001US-00989901.
XX
PA (MOLE-) APPLIED MOLECULAR EVOLUTION INC.
XX
PI Watkins JD;
XX
DR WPI; 2003-457585/43.
DR P-PSDB; ABR42859.
XX
PT New isolated human monoclonal antibody or its functional fragment
PT comprising a complementary determining region, useful for reducing
PT neoplastic cell proliferation, particularly for treating and diagnosing
PT cancer.
XX
PS Disclosure; Page 116-117; 151pp; English.
XX
CC This nucleotide sequence encodes the heavy chain variable region of
CC tumour-specific human monoclonal antibody (MAb) LH11238. The hybridoma
CC producing this MAb was generated by in vitro immunization of human spleen
CC cells with breast carcinoma cells, and immortalization of the immunized
CC lymphocytes by transformation with EBV and fusion with K6H6/B5
CC heteromyeloma cells. MAb LH11238 specifically binds to an antigen present
CC on the surface and lysosomal compartments of breast and ovarian carcinoma
CC cells, as compared to normal fibroblasts, peripheral blood lymphocytes,
CC melanoma cells or lung carcinoma cells. The invention provides tumour-
CC specific human MAbs and functional fragments of them. These specifically
CC bind to neoplastic cells compared to normal cells. They are used in
CC claimed methods of reducing neoplastic cell proliferation and of
CC detecting a neoplastic cell in a sample, where the neoplastic cell is a
CC breast cancer, lung cancer or ovarian cancer cell
XX
SQ Sequence 417 BP; 88 A; 123 C; 116 G; 90 T; 0 U; 0 Other;

Query Match 88.8%; Score 357.8; DB 8; Length 417;
Best Local Similarity 93.5%; Pred. No. 4.1e-91;
Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT------- 353
              |||||||||||||||||||||||||||||||||||||||||||||||||| |||
Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy        354 --------TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                        |  || |||  ||||||||||||||||||||||||||||||||||
Db        361 CGTCCTCACCGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417
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RESULT 14
AAD64349
ID   AAD64349 standard; DNA; 417 BP.
XX
AC   AAD64349;
XX
DT   12-FEB-2004  (first entry)
XX
DE   Human monoclonal antibody VH DNA from LH11238 clone.
XX
KW   Human; monoclonal antibody; neoplastic cell proliferation; breast cancer;
KW   lung cancer; tumour; ovarian cancer cell; heavy chain variable region;
KW   VH; cytostatic; gene; ds.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             1. .417
FT                   /*tag=  a
FT                   /product= "Human monoclonal antibody VH protein"
FT                   /note= "No stop codon"
FT                   /partial
XX
PN   US2003198638-A1.
XX
PD   23-OCT-2003.
XX
PF   19-NOV-2002; 2002US-00300675.
```

XX
PR 19-NOV-2001; 2001US-0421146P.
XX
PA (WATK/) WATKINS J D.
XX
PI Watkins JD;
XX
DR WPI; 2003-852771/79.
DR P-PSDB; ABW02445.
XX
PT New tumor-specific human monoclonal antibodies is useful for detecting
PT neoplastic cells in a biological sample, or for reducing proliferation of
PT neoplastic cells, particularly breast cancer, lung cancer or ovarian
PT cancer cells.
XX
PS Disclosure; SEQ ID NO 1; 0pp; English.
XX
CC The present invention relates to novel tumour-specific human monoclonal
CC antibodies or their functional fragments. Sequences of the invention are
CC useful for detecting neoplastic cells in a biological sample or for
CC reducing neoplastic cell proliferation, particularly breast cancer, lung
CC cancer or ovarian cancer cells. The present sequence is human monoclonal
CC antibody heavy chain variable region (VH) DNA from LH11238 clone
XX
SQ Sequence 417 BP; 88 A; 123 C; 116 G; 90 T; 0 U; 0 Other;

Query Match 88.8%; Score 357.8; DB 10; Length 417;
Best Local Similarity 93.5%; Pred. No. 4.1e-91;
Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT------- 353
              |||||||||||||||||||||||||||||||||||||||||||||||||| |||
Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy        354 --------TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                      |  || |||  ||||||||||||||||||||||||||||||||||
Db        361 CGTCCTCACCGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417
```

RESULT 15
AAA09695
ID AAA09695 standard; cDNA; 1507 BP.
XX
AC AAA09695;
XX
DT 01-FEB-2001 (first entry)
XX
DE Human immunoglobulin heavy chain cDNA sequence.
XX
KW Monoclonal antibody; immunoglobulin heavy chain; human; ss.
XX
OS Homo sapiens.
XX
PN WO200058499-A1.
XX
PD 05-OCT-2000.
XX
PF 30-MAR-2000; 2000WO-JP002022.
XX
PR 30-MAR-1999; 99JP-00087929.
XX
PA (NISB) JAPAN TOBACCO INC.
PA (ABGE-) ABGENIX INC.
XX
PI Kusunoki C, Fukushima A;
XX
DR WPI; 2000-611721/58.
DR P-PSDB; AAB26884.
XX
PT Transformation of a hybridoma with a gene encoding an immunoglobulin
PT heavy chain polypeptide for enhanced production of monoclonal antibody.
XX
PS Example 2; Page 35-39; 48pp; Japanese.
XX
CC This invention relates to a method for the production of a monoclonal
CC antibody. The antibody is produced by inserting a gene encoding an
CC immunoglobulin heavy chain polypeptide into cells which produce a
CC monoclonal antibody recognizing the immunoglobulin, and culturing the
CC transformant to express the antibody. The invention also includes
CC monoclonal antibody-expressing cells transformed by the method; and
CC transgenic non-human animals containing the cells and expressing a human
CC antibody. The method results in the enhanced expression of a monoclonal
CC antibody for diagnostic and therapeutic use. The present sequence
CC represents a human immunoglobulin heavy chain cDNA sequence used in an
CC example of the method of the invention
XX
SQ Sequence 1507 BP; 330 A; 498 C; 409 G; 270 T; 0 U; 0 Other;

  Query Match   87.7%; Score 353.4; DB 3; Length 1507;
  Best Local Similarity 93.4%; Pred. No. 1e-89;
  Matches 382; Conservative   0; Mismatches   21; Indels   6; Gaps   1;

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Db         12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || |||||||||||||||||||||||||| ||||  ||||| ||||||||||||||||
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Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGA------GAGTAATT 354
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Db        312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGGGGGAGCAGTG 371

Qy        355 AATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db        372 GCTGCGTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 420
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Search completed: December 2, 2004, 13:05:52
Job time : 315.035 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03 ; Search time 58.86 Seconds
(without alignments)
4866.596 Million cell updates/sec

Title: US-08-728-463B-205
Perfect score: 403
Sequence: 1 ATGAAACACCTGTGGTTCTT.....CCTGGTCACCGTCTCCTCAG 403

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 824507 seqs, 355394441 residues

Total number of hits satisfying chosen parameters: 1649014

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	403	100.0	403	3	US-09-042-353-357	Sequence 357, App
2	403	100.0	403	3	US-08-758-417A-205	Sequence 205, App
3	391.4	97.1	404	3	US-09-042-353-355	Sequence 355, App
4	391.4	97.1	404	3	US-08-758-417A-203	Sequence 203, App
5	383.8	95.2	524	3	US-09-042-353-419	Sequence 419, App
6	383.8	95.2	524	3	US-08-758-417A-219	Sequence 219, App
7	383.8	95.2	4926	3	US-09-042-353-418	Sequence 418, App
8	383.8	95.2	4926	3	US-08-758-417A-268	Sequence 268, App
9	357.8	88.8	417	4	US-09-203-768A-1	Sequence 1, Appli
10	335.6	83.3	413	3	US-09-042-353-351	Sequence 351, App
11	335.6	83.3	413	3	US-08-758-417A-199	Sequence 199, App
12	332	82.4	1341	4	US-09-372-425A-7	Sequence 7, Appli
13	332	82.4	2674	4	US-09-372-425A-1	Sequence 1, Appli
14	304.4	75.5	402	1	US-08-259-372A-5	Sequence 5, Appli
15	304.4	75.5	402	1	US-08-468-671-5	Sequence 5, Appli
16	300	74.4	687	3	US-08-545-809A-34	Sequence 34, Appl
17	298.4	74.0	1567	3	US-09-049-672A-17	Sequence 17, Appl
18	297.8	73.9	1418	3	US-08-793-450-7	Sequence 7, Appli
19	286.4	71.1	426	2	US-08-480-774A-1	Sequence 1, Appli
20	284	70.5	384	2	US-08-477-553A-49	Sequence 49, Appl
21	280.2	69.5	363	2	US-08-477-553A-50	Sequence 50, Appl
22	277.6	68.9	369	3	US-08-793-450-3	Sequence 3, Appli
23	273.8	67.9	1543	4	US-09-800-729-74	Sequence 74, Appl
24	270.2	67.0	1431	3	US-08-487-550-11	Sequence 11, Appl
25	270.2	67.0	1431	4	US-09-526-098-11	Sequence 11, Appl
26	270.2	67.0	1431	4	US-09-383-916-11	Sequence 11, Appl
27	269	66.7	285	3	US-09-042-353-150	Sequence 150, App
28	269	66.7	285	3	US-08-758-417A-414	Sequence 414, App
29	269	66.7	450	4	US-09-582-337-13	Sequence 13, Appl
30	268	66.5	622	3	US-08-545-809A-59	Sequence 59, Appl
31	266.2	66.1	423	3	US-08-803-085-2	Sequence 2, Appli
32	261.6	64.9	372	2	US-08-477-553A-48	Sequence 48, Appl
33	261.6	64.9	650	3	US-08-545-809A-4	Sequence 4, Appli
34	260.6	64.7	1404	3	US-08-523-894-7	Sequence 7, Appli
35	260.6	64.7	1404	3	US-08-523-894-9	Sequence 9, Appli
36	260.6	64.7	1404	3	US-08-523-894-11	Sequence 11, Appl
37	258.8	64.2	321	2	US-08-477-553A-47	Sequence 47, Appl
38	258	64.0	423	1	US-08-379-072A-19	Sequence 19, Appl
39	258	64.0	423	1	US-08-481-869-19	Sequence 19, Appl

40	258	64.0	423	1	US-08-476-237-15	Sequence 15, Appl
41	257.4	63.9	1431	3	US-08-487-550-3	Sequence 3, Appli
42	257.4	63.9	1431	4	US-09-526-098-3	Sequence 3, Appli
43	257.4	63.9	1431	4	US-09-383-916-3	Sequence 3, Appli
44	256.6	63.7	840	3	US-09-260-527-4	Sequence 4, Appli
45	255	63.3	420	1	US-08-478-039-107	Sequence 107, App

ALIGNMENTS

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RESULT 1
US-09-042-353-357
; Sequence 357, Application US/09042353
; Patent No. 6255458
;  GENERAL INFORMATION:
;    APPLICANT:  Lonberg, Nils
;    APPLICANT:  Kay, Robert M.
;    TITLE OF INVENTION:  Transgenic No. 6255458-Human Animals for
;    TITLE OF INVENTION:  Producing Heterologous Antibodies
;    NUMBER OF SEQUENCES:  421
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/042,353
;      FILING DATE:  13-MAR-1998
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/810,279
;      FILING DATE:  17-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/853,408
;      FILING DATE:  18-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/904,068
;      FILING DATE:  23-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/990,860
;      FILING DATE:  16-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/053,131
;      FILING DATE:  26-APR-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/096,762
;      FILING DATE:  22-JUL-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/155,301
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; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 357:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 403 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-357

Query Match 100.0%; Score 403; DB 3; Length 403;
Best Local Similarity 100.0%; Pred. No. 1e-116;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db         121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy         181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db         181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

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Qy         301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Qy         361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db         361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403


RESULT 2
US-08-758-417A-205
; Sequence 205, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
;             APPLICATION NUMBER: US 08/209,741
;             FILING DATE: 09-MAR-1994
;             APPLICATION NUMBER: US 08/165,699
;             FILING DATE: 10-DEC-1993
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;              APPLICATION NUMBER: US 08/161,739
;              FILING DATE: 03-DEC-1993
;              APPLICATION NUMBER: US 08/155,301
;              FILING DATE: 18-NOV-1993
;              APPLICATION NUMBER: US 08/096,762
;              FILING DATE: 22-JUL-1993
;              APPLICATION NUMBER: US 08/053,131
;              FILING DATE: 26-APR-1993
;              APPLICATION NUMBER: US 07/990,860
;              FILING DATE: 16-DEC-1992
;         ATTORNEY/AGENT INFORMATION:
;              NAME: Serafini, Andrew T.
;              REGISTRATION NUMBER: 41,303
;              REFERENCE/DOCKET NUMBER: 014643-009030US
;         TELECOMMUNICATION INFORMATION:
;              TELEPHONE: (415) 576-0200
;              TELEFAX: (415) 576-0300
;    INFORMATION FOR SEQ ID NO: 205:
;         SEQUENCE CHARACTERISTICS:
;              LENGTH: 403 base pairs
;              TYPE: nucleic acid
;              STRANDEDNESS: single
;              TOPOLOGY: linear
;         MOLECULE TYPE: DNA
;         SEQUENCE DESCRIPTION: SEQ ID NO: 205:
US-08-758-417A-205

  Query Match             100.0%;  Score 403;  DB 3;  Length 403;
  Best Local Similarity   100.0%;  Pred. No. 1e-116;
  Matches  403;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db         361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403


RESULT 3
US-09-042-353-355
; Sequence 355, Application US/09042353
; Patent No. 6255458
;  GENERAL INFORMATION:
;    APPLICANT:  Lonberg, Nils
;    APPLICANT:  Kay, Robert M.
;    TITLE OF INVENTION:  Transgenic No. 6255458-Human Animals for
;    TITLE OF INVENTION:  Producing Heterologous Antibodies
;    NUMBER OF SEQUENCES:  421
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/042,353
;      FILING DATE:  13-MAR-1998
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/810,279
;      FILING DATE:  17-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/853,408
;      FILING DATE:  18-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/904,068
;      FILING DATE:  23-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/990,860
;      FILING DATE:  16-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/053,131
;      FILING DATE:  26-APR-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/096,762
;      FILING DATE:  22-JUL-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/155,301
;      FILING DATE:  18-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/161,739
;      FILING DATE:  03-DEC-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/165,699
;      FILING DATE:  10-DEC-1993
;    PRIOR APPLICATION DATA:
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;       APPLICATION NUMBER:  US 08/209,741
;       FILING DATE:  09-MAR-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/352,322
;       FILING DATE:  07-DEC-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/544,404
;       FILING DATE:  10-OCT-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/728,463
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US96/16433
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/758,417
;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  355:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  404 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-355

  Query Match             97.1%;  Score 391.4;  DB 3;  Length 404;
  Best Local Similarity   99.7%;  Pred. No. 4.3e-113;
  Matches  392;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db        132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Db        312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
                |||||||||||||||||||||||||||||||
Db        372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404


RESULT 4
US-08-758-417A-203
; Sequence 203, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
;             APPLICATION NUMBER: US 08/209,741
;             FILING DATE: 09-MAR-1994
;             APPLICATION NUMBER: US 08/165,699
;             FILING DATE: 10-DEC-1993
;             APPLICATION NUMBER: US 08/161,739
;             FILING DATE: 03-DEC-1993
;             APPLICATION NUMBER: US 08/155,301
;             FILING DATE: 18-NOV-1993
;             APPLICATION NUMBER: US 08/096,762
;             FILING DATE: 22-JUL-1993
;             APPLICATION NUMBER: US 08/053,131
;             FILING DATE: 26-APR-1993
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; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 203:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 404 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 203:
US-08-758-417A-203

Query Match 97.1%; Score 391.4; DB 3; Length 404;
Best Local Similarity 99.7%; Pred. No. 4.3e-113;
Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
              ||||||||||||||||||||||||||||||||
Db        372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404
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RESULT 5
US-09-042-353-419
; Sequence 419, Application US/09042353
; Patent No. 6255458
; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils
; APPLICANT: Kay, Robert M.
; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
; TITLE OF INVENTION: Producing Heterologous Antibodies
; NUMBER OF SEQUENCES: 421
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995

; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 419:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 524 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-419

Query Match 95.2%; Score 383.8; DB 3; Length 524;
Best Local Similarity 97.0%; Pred. No. 1.2e-110;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||
Db        193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||||| |||||
Db        253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db          373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415


RESULT 6
US-08-758-417A-219
; Sequence 219, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
;             APPLICATION NUMBER: US 08/209,741
;             FILING DATE: 09-MAR-1994
;             APPLICATION NUMBER: US 08/165,699
;             FILING DATE: 10-DEC-1993
;             APPLICATION NUMBER: US 08/161,739
;             FILING DATE: 03-DEC-1993
;             APPLICATION NUMBER: US 08/155,301
;             FILING DATE: 18-NOV-1993
;             APPLICATION NUMBER: US 08/096,762
;             FILING DATE: 22-JUL-1993
;             APPLICATION NUMBER: US 08/053,131
;             FILING DATE: 26-APR-1993
;             APPLICATION NUMBER: US 07/990,860
;             FILING DATE: 16-DEC-1992
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Serafini, Andrew T.
;             REGISTRATION NUMBER: 41,303
;             REFERENCE/DOCKET NUMBER: 014643-009030US
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (415) 576-0200
```

; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 219:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 524 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 219:
US-08-758-417A-219

Query Match 95.2%; Score 383.8; DB 3; Length 524;
Best Local Similarity 97.0%; Pred. No. 1.2e-110;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||
Db        193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||| |||||
Db        253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||
Db        313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| ||||||||||||||||||||||||||||||||
Db        373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415
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RESULT 7
US-09-042-353-418
; Sequence 418, Application US/09042353
; Patent No. 6255458
; GENERAL INFORMATION:
; APPLICANT: Lonberg, Nils
; APPLICANT: Kay, Robert M.
; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
; TITLE OF INVENTION: Producing Heterologous Antibodies
; NUMBER OF SEQUENCES: 421
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417

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;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  418:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  4926 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-418

  Query Match             95.2%;  Score 383.8;  DB 3;  Length 4926;
  Best Local Similarity   97.0%;  Pred. No. 3e-110;
  Matches  391;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || |||||||||||||||||||||||| |||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| |||||||||||||||||||||||||||||||||
Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430


RESULT 8
US-08-758-417A-268
; Sequence 268, Application US/08758417A
; Patent No. 6300129
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;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
;             APPLICATION NUMBER: US 08/209,741
;             FILING DATE: 09-MAR-1994
;             APPLICATION NUMBER: US 08/165,699
;             FILING DATE: 10-DEC-1993
;             APPLICATION NUMBER: US 08/161,739
;             FILING DATE: 03-DEC-1993
;             APPLICATION NUMBER: US 08/155,301
;             FILING DATE: 18-NOV-1993
;             APPLICATION NUMBER: US 08/096,762
;             FILING DATE: 22-JUL-1993
;             APPLICATION NUMBER: US 08/053,131
;             FILING DATE: 26-APR-1993
;             APPLICATION NUMBER: US 07/990,860
;             FILING DATE: 16-DEC-1992
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Serafini, Andrew T.
;             REGISTRATION NUMBER: 41,303
;             REFERENCE/DOCKET NUMBER: 014643-009030US
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (415) 576-0200
;             TELEFAX: (415) 576-0300
;   INFORMATION FOR SEQ ID NO: 268:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 4926 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: DNA
```

; SEQUENCE DESCRIPTION: SEQ ID NO: 268:
US-08-758-417A-268

Query Match 95.2%; Score 383.8; DB 3; Length 4926;
Best Local Similarity 97.0%; Pred. No. 3e-110;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Db         28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||| ||||||||||||||||||||||||||||||||||| |||
Db        148 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||
Db        208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              || ||||||||||||||||||||||||| |||||||||||||||||||| |||||
Db        268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| ||||||||||||||||||||||||||||||||||||||||
Db        328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||||| ||||||||||||||||||||||||||||||||
Db        388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430
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RESULT 9
US-09-203-768A-1
; Sequence 1, Application US/09203768A
; Patent No. 6787638
; GENERAL INFORMATION:
; APPLICANT: Huse, William D.
; APPLICANT: Watkins, Jeffry D.
; TITLE OF INVENTION: Tumor Specific Human Monoclonal Antibodies and Methods
; TITLE OF INVENTION: of Use
; FILE REFERENCE: P-IX 2947
; CURRENT APPLICATION NUMBER: US/09/203,768A
; CURRENT FILING DATE: 1998-12-02
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 417
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(417)

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;   NAME/KEY: sig_peptide
;   LOCATION: (1)..(57)
US-09-203-768A-1

  Query Match             88.8%;  Score 357.8;  DB 4;  Length 417;
  Best Local Similarity   93.5%;  Pred. No. 1.5e-102;
  Matches  390;  Conservative    0;  Mismatches   12;  Indels   15;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT------- 353
              |||||||||||||||||||||||||||||||||||||||||||||||||| |||
Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy        354 --------TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                      |  || |||  ||||||||||||||||||||||||||||||||||
Db        361 CGTCCTCACCGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417


RESULT 10
US-09-042-353-351
; Sequence 351, Application US/09042353
; Patent No. 6255458
;  GENERAL INFORMATION:
;    APPLICANT:  Lonberg, Nils
;    APPLICANT:  Kay, Robert M.
;    TITLE OF INVENTION:  Transgenic No. 6255458-Human Animals for
;    TITLE OF INVENTION:  Producing Heterologous Antibodies
;    NUMBER OF SEQUENCES:  421
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
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;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/042,353
;       FILING DATE:  13-MAR-1998
;       CLASSIFICATION:  800
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/810,279
;       FILING DATE:  17-DEC-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/853,408
;       FILING DATE:  18-MAR-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/904,068
;       FILING DATE:  23-JUN-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/990,860
;       FILING DATE:  16-DEC-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/053,131
;       FILING DATE:  26-APR-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/096,762
;       FILING DATE:  22-JUL-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/155,301
;       FILING DATE:  18-NOV-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/161,739
;       FILING DATE:  03-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/165,699
;       FILING DATE:  10-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/209,741
;       FILING DATE:  09-MAR-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/352,322
;       FILING DATE:  07-DEC-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/544,404
;       FILING DATE:  10-OCT-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/728,463
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US96/16433
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/758,417
;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
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;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  351:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  413 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-351

  Query Match             83.3%;  Score 335.6;  DB 3;  Length 413;
  Best Local Similarity   91.8%;  Pred. No. 1.4e-95;
  Matches  369;  Conservative    0;  Mismatches   24;  Indels    9;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| || ||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 GTGCAGCTTCATCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||||||||||||||||||| ||||||||||||||||||||||||||
Db        132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTTCTGGAGCTGGATCCGCCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || | |||||||||||||||||||||||| ||||| ||||||||||||||||||||||||
Db        192 GGGAGGGGGCTGGAGTGGATTGGGGAAATCCATCATCGTGGAAGCACCAACTACAACCCG 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||| |||||||||||||| ||||||| |||||||||| |||||||||||||||| |
Db        252 TCCCTCGAGAGTCGAGTCACCCTATCAGTAGACACGTCCAAAAACCAGTTCTCCCTGAGG 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAAT--- 357
              ||||| ||||||||||||||||||||||||||||||||||||||||  |||| |
Db        312 CTGAGTTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGACATTACTATG 371

Qy        358 ------TGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
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Db        372 GTTCGGGGAGTACCTCACTGGGGCCAGGGAACCCTGGTCACC 413


RESULT 11
US-08-758-417A-199
; Sequence 199, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;       APPLICANT: Lonberg, Nils
;                  Kay, Robert M.
;       TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                           Producing Heterologous Antibodies
;       NUMBER OF SEQUENCES: 417
;       CORRESPONDENCE ADDRESS:
```

; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/758,417A
; FILING DATE: 02-Dec-1996
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 199:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 413 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 199:
US-08-758-417A-199

Query Match 83.3%; Score 335.6; DB 3; Length 413;
Best Local Similarity 91.8%; Pred. No. 1.4e-95;
Matches 369; Conservative 0; Mismatches 24; Indels 9; Gaps 1;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| || ||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 GTGCAGCTTCATCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||||||||||||||||||| ||||||||||||||||||||||||||
Db        132 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTTCTGGAGCTGGATCCGCCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || | ||||||||||||||||||||||| ||||| ||||||||||||||||||||||||
Db        192 GGGAGGGGGCTGGAGTGGATTGGGGAAATCCATCATCGTGGAAGCACCAACTACAACCCG 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||| |||||||||||||| ||||||| |||||||||| |||||||||||||||| |
Db        252 TCCCTCGAGAGTCGAGTCACCCTATCAGTAGACACGTCCAAAAACCAGTTCTCCCTGAGG 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAAT--- 357
              ||||| ||||||||||||||||||||||||||||||||||||||||  |||| |
Db        312 CTGAGTTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGACATTACTATG 371

Qy        358 ------TGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
                    |  |    | ||||||||||||||||||||||||
Db        372 GTTCGGGGAGTACCTCACTGGGGCCAGGGAACCCTGGTCACC 413
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RESULT 12
US-09-372-425A-7
; Sequence 7, Application US/09372425A
; Patent No. 6475749
;  GENERAL INFORMATION:
;    APPLICANT:  Sherie L. Morrison
;    APPLICANT:  Ramon Montano
;    TITLE OF INVENTION:  Improved Rh Antibody
;    NUMBER OF SEQUENCES:  11
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Oppenheimer Wolff & Donnelly LLP
;      STREET:  2029 Century Park East, Suite 3800
;      CITY:  Los Angeles
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy Disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  Windows 98
;      SOFTWARE:  MS Word
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/372,425A
;      FILING DATE:  August 11, 1999
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
```

; ATTORNEY/AGENT INFORMATION:
; NAME: Oldenakmp, David J.
; REGISTRATION NUMBER: 29,421
; REFERENCE/DOCKET NUMBER: 510015-223
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (310) 788-5000
; TELEFAX: (310) 788-5100
; INFORMATION FOR SEQ ID NO: 7:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1341 nucleotides
; TYPE: nucleotide
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Heavy chains with tailpiece - DNA
; MOLECULE TYPE: (without introns)
US-09-372-425A-7

Query Match 82.4%; Score 332; DB 4; Length 1341;
Best Local Similarity 97.1%; Pred. No. 3e-94;
Matches 338; Conservative 0; Mismatches 10; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||||||||||||||| || ||||||| ||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTCACCACTGGAGTTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || |||||||||||||||||||| |||||| |||||||||||||||||||| |||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGGAAGCACCAATTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| |||||||||||||||||||||||| |||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCGTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
              |||| ||||||||||||||||||||||||||||||||||||||||||
Db        301 CTGACCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
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RESULT 13
US-09-372-425A-1
; Sequence 1, Application US/09372425A
; Patent No. 6475749
; GENERAL INFORMATION:
; APPLICANT: Sherie L. Morrison
; APPLICANT: Ramon Montano
; TITLE OF INVENTION: Improved Rh Antibody
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Oppenheimer Wolff & Donnelly LLP

```
;       STREET:  2029 Century Park East, Suite 3800
;       CITY:  Los Angeles
;       STATE:  CA
;       COUNTRY:  USA
;       ZIP:  90067
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy Disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  Windows 98
;       SOFTWARE:  MS Word
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/372,425A
;       FILING DATE:  August 11, 1999
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Oldenakmp, David J.
;       REGISTRATION NUMBER:  29,421
;       REFERENCE/DOCKET NUMBER:  510015-223
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (310) 788-5000
;       TELEFAX:  (310) 788-5100
;   INFORMATION FOR SEQ ID NO:  1:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  2674 nucleotides
;       TYPE:  nucleotide
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  Heavy chain with Tailpiece - DNA
;     MOLECULE TYPE:  (with introns)
US-09-372-425A-1

  Query Match             82.4%;  Score 332;  DB 4;  Length 2674;
  Best Local Similarity   97.1%;  Pred. No. 4e-94;
  Matches  338;  Conservative    0;  Mismatches   10;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||||||||||||||| || ||||||| ||||||||||||||||||
Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTCACCACTGGAGTTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        181 GGGAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGGAAGCACCAATTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| ||||||||||||||||||||||| |||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCGTGAAG 300
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Qy         301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
               |||| ||||||||||||||||||||||||||||||||||||||||||
Db         301 CTGACCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348


RESULT 14
US-08-259-372A-5
; Sequence 5, Application US/08259372A
; Patent No. 5565354
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/259,372A
;      FILING DATE:  14-JUN-1994
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/871,426
;      FILING DATE:  21-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/676,036
;      FILING DATE:  27-MAR-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/538,796
;      FILING DATE:  15-JUN-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/192,754
;      FILING DATE:  11-MAY-1988
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/925,196
;      FILING DATE:  31-OCT-1986
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/904,517
;      FILING DATE:  05-SEP-1986
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M.
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-50-7
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  5:
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;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  402 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  unknown
;       TOPOLOGY:  unknown
;     MOLECULE TYPE:  cDNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     ORIGINAL SOURCE:
;       ORGANISM:  Homo sapiens
;       CELL TYPE:  Hybridoma
;       CELL LINE:  ZM1-2
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..402
US-08-259-372A-5

  Query Match             75.5%;  Score 304.4;  DB 1;  Length 402;
  Best Local Similarity   84.8%;  Pred. No. 8e-86;
  Matches  341;  Conservative    0;  Mismatches   61;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||| |||||||||| |||||||||||| ||||||||
Db          1 ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGTTCCCAGATGGGTCGTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||| || ||||||||||||||||||||
Db         61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGGCTGCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| ||||||   |||| |||||||||| ||||| |||||  ||| |||| |||||| |
Db        121 TGCACTGTCTCCCGTGGCTCCTTCAGTGATTACTTCTGGAATTGGTTCCGGCAGCCCGCC 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        181 GGGAAGCGCCTGGAGTGGCTTGGGCGTGTCTATACCAGTGGAAGTGTCGACTACAACCCC 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
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Db        361 TTTGACTACTGGGGCCAGGGAGCCCTGGTCACCGTCTCCCCA 402


RESULT 15
US-08-468-671-5
; Sequence 5, Application US/08468671
; Patent No. 5648077
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
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; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
; NUMBER OF SEQUENCES: 16
; CORRESPONDENCE ADDRESS:
;   ADDRESSEE: Townsend and Townsend and Crew LLP
;   STREET: Two Embarcadero Center, Eighth Floor
;   CITY: San Francisco
;   STATE: CA
;   COUNTRY: USA
;   ZIP: 94111-3834
; COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/08/468,671
;   FILING DATE: 06-JUN-1995
;   CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 08/259,372
;   FILING DATE: 14-JUN-1994
;   APPLICATION NUMBER: US 07/871,426
;   FILING DATE: 21-APR-1992
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 07/676,036
;   FILING DATE: 27-MAR-1991
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 07/538,796
;   FILING DATE: 15-JUN-1990
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 07/192,754
;   FILING DATE: 11-MAY-1988
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 06/925,196
;   FILING DATE: 31-OCT-1986
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 06/904,517
;   FILING DATE: 05-SEP-1986
; ATTORNEY/AGENT INFORMATION:
;   NAME: Smith, William M.
;   REGISTRATION NUMBER: 30,223
;   REFERENCE/DOCKET NUMBER: 11823-50-7
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE: (415) 326-2400
;   TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
;   LENGTH: 402 base pairs
;   TYPE: nucleic acid
;   STRANDEDNESS: unknown
;   TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
;   ORGANISM: Homo sapiens
;   CELL TYPE: Hybridoma

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;       CELL LINE:  ZM1-2
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..402
US-08-468-671-5

  Query Match             75.5%;  Score 304.4;  DB 1;  Length 402;
  Best Local Similarity   84.8%;  Pred. No. 8e-86;
  Matches  341;  Conservative    0;  Mismatches   61;  Indels    0;  Gaps    0;

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Db          1 ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGTTCCCAGATGGGTCGTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| ||||||   |||| |||||||||| ||||| |||||  ||| |||| |||||| |
Db        121 TGCACTGTCTCCCGTGGCTCCTTCAGTGATTACTTCTGGAATTGGTTCCGGCAGCCCGCC 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        181 GGGAAGCGCCTGGAGTGGCTTGGGCGTGTCTATACCAGTGGAAGTGTCGACTACAACCCC 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||| | ||||| |||||||||||||| |||||||||||| |
Db        241 TCCCTCAAGAGTCGAGTCACCGTGTCAGTGGACACGTCCAAGAAGCAGTTCTCCCTGAGG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||| |||||||||||| |||||||| |||||||||| | |     |
Db        301 CTGAGCTCTGTGACCGTCGCGGACACGGCCGTGTATTATTGTGCGAGAGGACTGTCCGGT 360

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
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Db        361 TTTGACTACTGGGGCCAGGGAGCCCTGGTCACCGTCTCCCCA 402


Search completed: December  2, 2004, 17:07:34
Job time : 59.86 secs

                          GenCore version 5.1.6
                    Copyright (c) 1993 - 2004  Compugen Ltd.


OM nucleic - nucleic search, using sw model

Run on:         December  2, 2004, 17:01:26 ; Search time 308.977 Seconds
                                            (without alignments)
                                            7166.911 Million cell updates/sec

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Perfect score:  403
Sequence:       1 ATGAAACACCTGTGGTTCTT.........CCTGGTCACCGTCTCCTCAG 403

Scoring table:  IDENTITY_NUC
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Gapop 10.0 , Gapext 1.0

Searched: 3694831 seqs, 2747406616 residues

Total number of hits satisfying chosen parameters: 7389662

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
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21: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		357.8	88.8	417	15	US-10-300-675-1	Sequence 1, Appli
2		332	82.4	1341	15	US-10-194-801C-7	Sequence 7, Appli
3		332	82.4	2674	15	US-10-194-801C-1	Sequence 1, Appli
4		326	80.9	1990	17	US-10-684-109-104	Sequence 104, App
5	c	326	80.9	1990	17	US-10-684-109-105	Sequence 105, App
6		323.6	80.3	481	17	US-10-693-629-43	Sequence 43, Appl
7		322.8	80.1	1990	17	US-10-684-109-69	Sequence 69, Appl
8	c	322.8	80.1	1990	17	US-10-684-109-70	Sequence 70, Appl
9		319.8	79.4	426	16	US-10-399-518-94	Sequence 94, Appl
10		319.8	79.4	792	16	US-10-399-518-110	Sequence 110, App
11		319.8	79.4	822	16	US-10-399-518-113	Sequence 113, App
12		319	79.2	1401	15	US-10-292-088-85	Sequence 85, Appl

	13	316.4	78.5	1990	17	US-10-684-109-86	Sequence 86, Appl
C	14	316.4	78.5	1990	17	US-10-684-109-87	Sequence 87, Appl
	15	315.8	78.4	1401	15	US-10-292-088-69	Sequence 69, Appl
	16	311.6	77.3	1990	17	US-10-684-109-98	Sequence 98, Appl
C	17	311.6	77.3	1990	17	US-10-684-109-99	Sequence 99, Appl
	18	311	77.2	411	16	US-10-309-762-114	Sequence 114, App
	19	310.6	77.1	423	16	US-10-309-762-104	Sequence 104, App
	20	309	76.7	629	16	US-10-264-049-2156	Sequence 2156, Ap
	21	308.4	76.5	467	18	US-10-478-056-16	Sequence 16, Appl
	22	307.4	76.3	1395	15	US-10-292-088-21	Sequence 21, Appl
	23	306.4	76.0	414	15	US-10-309-764-110	Sequence 110, App
	24	306.2	76.0	1401	15	US-10-292-088-29	Sequence 29, Appl
	25	305.8	75.9	423	16	US-10-309-762-108	Sequence 108, App
	26	305.4	75.8	429	16	US-10-309-762-110	Sequence 110, App
	27	304.2	75.5	462	17	US-10-693-629-47	Sequence 47, Appl
	28	303.6	75.3	467	18	US-10-478-056-20	Sequence 20, Appl
	29	301.6	74.8	505	9	US-09-954-456-1183	Sequence 1183, Ap
	30	301.6	74.8	200000	17	US-10-672-764A-32	Sequence 32, Appl
	31	301	74.7	423	16	US-10-309-762-106	Sequence 106, App
	32	300	74.4	348	16	US-10-338-366-5	Sequence 5, Appli
	33	300	74.4	414	15	US-10-309-764-106	Sequence 106, App
	34	299.8	74.4	353	9	US-09-864-761-28159	Sequence 28159, A
	35	299	74.2	413	10	US-09-918-995-16699	Sequence 16699, A
	36	298.4	74.0	414	15	US-10-309-764-114	Sequence 114, App
	37	297.8	73.9	356	16	US-10-388-214A-35	Sequence 35, Appl
	38	294	73.0	1996	17	US-10-684-109-92	Sequence 92, Appl
C	39	294	73.0	1996	17	US-10-684-109-93	Sequence 93, Appl
	40	293.2	72.8	354	15	US-10-371-942-89	Sequence 89, Appl
	41	293	72.7	336	16	US-10-338-366-9	Sequence 9, Appli
	42	292	72.5	669	10	US-09-972-656-65	Sequence 65, Appl
	43	290.4	72.1	356	16	US-10-388-214A-37	Sequence 37, Appl
	44	289.8	71.9	375	15	US-10-371-942-109	Sequence 109, App
	45	289.6	71.9	432	15	US-10-389-221-9	Sequence 9, Appli

ALIGNMENTS

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RESULT 1
US-10-300-675-1
; Sequence 1, Application US/10300675
; Publication No. US20030198638A1
; GENERAL INFORMATION:
;  APPLICANT: Watkins, Jeffry D.
;  TITLE OF INVENTION: Tumor Specific Monoclonal Antibodies
;  FILE REFERENCE: P-IX 5519
;  CURRENT APPLICATION NUMBER: US/10/300,675
;  CURRENT FILING DATE:  2002-11-19
;  PRIOR APPLICATION NUMBER: US 09/989,901
;  PRIOR FILING DATE: 2001-11-19
;  NUMBER OF SEQ ID NOS: 59
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
;   LENGTH: 417
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
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;   NAME/KEY: CDS
;   LOCATION: (1)...(417)
US-10-300-675-1

  Query Match             88.8%;  Score 357.8;  DB 15;  Length 417;
  Best Local Similarity   93.5%;  Pred. No. 1.2e-102;
  Matches  390;  Conservative    0;  Mismatches   12;  Indels   15;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT------- 353
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Db        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy        354 --------TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                      |  || |||  ||||||||||||||||||||||||||||||||||
Db        361 CGTCCTCACCGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417


RESULT 2
US-10-194-801C-7
; Sequence 7, Application US/10194801C
; Publication No. US20030143643A1
;   GENERAL INFORMATION:
;        APPLICANT: Sherie L. Morrison
;                   Ramon Montano
;        TITLE OF INVENTION: Rh Antibody
;        NUMBER OF SEQUENCES: 11
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Shapiro & Dupont LLP
;             STREET: 233 Wilshire Boulevard, Suite 700
;             CITY: Santa Monica
;             STATE: CA
;             COUNTRY: USA
;             ZIP: 90067
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy Disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: Windows 2000
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;             SOFTWARE: MS Word
;         CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/10/194,801C
;             FILING DATE: 11-Mar-2003
;             CLASSIFICATION: <Unknown>
;         PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 09/372,425
;             FILING DATE: August 11, 1999
;         ATTORNEY/AGENT INFORMATION:
;             NAME: Oldenkamp, David J.
;             REGISTRATION NUMBER: 29,421
;             REFERENCE/DOCKET NUMBER: 0180.0033
;         TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (310) 319-5411
;             TELEFAX: (310) 319-5401
;    INFORMATION FOR SEQ ID NO: 7:
;         SEQUENCE CHARACTERISTICS:
;             LENGTH: 1341 nucleotides
;             TYPE: nucleotide
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;         MOLECULE TYPE: Heavy chains with tailpiece - DNA
;                        (without introns)
;         SEQUENCE DESCRIPTION: SEQ ID NO: 7
US-10-194-801C-7

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  Best Local Similarity   97.1%;  Pred. No. 2.1e-94;
  Matches  338;  Conservative    0;  Mismatches   10;  Indels    0;  Gaps    0;

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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTCACCACTGGAGTTGGATCCGCCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || |||||||||||||||||||| |||||| |||||||||||||||||| |||||||||
Db        181 GGGAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGGAAGCACCAATTACAACCCG 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCGTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
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RESULT 3
US-10-194-801C-1
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; Sequence 1, Application US/10194801C
; Publication No. US20030143643A1
;   GENERAL INFORMATION:
;        APPLICANT: Sherie L. Morrison
;                   Ramon Montano
;        TITLE OF INVENTION: Rh Antibody
;        NUMBER OF SEQUENCES: 11
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Shapiro & Dupont LLP
;             STREET: 233 Wilshire Boulevard, Suite 700
;             CITY: Santa Monica
;             STATE: CA
;             COUNTRY: USA
;             ZIP: 90067
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy Disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: Windows 2000
;             SOFTWARE: MS Word
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/10/194,801C
;             FILING DATE: 11-Mar-2003
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 09/372,425
;             FILING DATE: August 11, 1999
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Oldenkamp, David J.
;             REGISTRATION NUMBER: 29,421
;             REFERENCE/DOCKET NUMBER: 0180.0033
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (310) 319-5411
;             TELEFAX: (310) 319-5401
;   INFORMATION FOR SEQ ID NO: 1:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 2674 nucleotides
;             TYPE: nucleotide
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: Heavy chain with Tailpiece - DNA
;                       (with introns)
;        SEQUENCE DESCRIPTION: SEQ ID NO: 1
US-10-194-801C-1

  Query Match             82.4%;  Score 332;  DB 15;  Length 2674;
  Best Local Similarity   97.1%;  Pred. No. 2.5e-94;
  Matches  338;  Conservative    0;  Mismatches   10;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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RESULT 4
US-10-684-109-104
; Sequence 104, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
;  APPLICANT: DeVries, Peter J.
;  APPLICANT:  Green, Larry L.
;  APPLICANT:  Ostrow, David H.
;  APPLICANT:  Reilly, Edward B.
;  APPLICANT:  Wieler, James
;  TITLE OF INVENTION: Erythropoietin Receptor Binding
;  TITLE OF INVENTION:  Antibodies
;  FILE REFERENCE: 6989.US.02
;  CURRENT APPLICATION NUMBER: US/10/684,109
;  CURRENT FILING DATE:  2003-10-10
;  PRIOR APPLICATION NUMBER: 10/269,711
;  PRIOR FILING DATE: 2002-10-14
;  NUMBER OF SEQ ID NOS: 115
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 104
;   LENGTH: 1990
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-684-109-104

  Query Match             80.9%;  Score 326;  DB 17;  Length 1990;
  Best Local Similarity   89.4%;  Pred. No. 1.8e-92;
  Matches  363;  Conservative    0;  Mismatches   40;  Indels    3;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||||
Db         61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||| ||| ||||| |||||||||||||||||||| |||||||||
Db        121 TGCACTGTCTCTGGTGGCTCCATCAGTCGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 180
```

```
Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| ||||||||||||||| |  ||  | | ||||| |||||| ||||||||||
Db        181 GGGAAGGGACTGGAGTGGATTGGGTATGTCTCTTACAGTGGGAGCACCTACTACAACCCC 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| |||||||||| |||||||||||||||||  |       ||
Db        301 CTGAGCTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGATAAACTGGGG 360

Qy        361 TT---CGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
               |    |||  ||||||||||||||||||||||||||||||||||
Db        361 ATTGGAGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 406
```

RESULT 5
US-10-684-109-105/c
; Sequence 105, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
; APPLICANT: DeVries, Peter J.
; APPLICANT: Green, Larry L.
; APPLICANT: Ostrow, David H.
; APPLICANT: Reilly, Edward B.
; APPLICANT: Wieler, James
; TITLE OF INVENTION: Erythropoietin Receptor Binding
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: 6989.US.02
; CURRENT APPLICATION NUMBER: US/10/684,109
; CURRENT FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: 10/269,711
; PRIOR FILING DATE: 2002-10-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 105
; LENGTH: 1990
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-684-109-105

Query Match 80.9%; Score 326; DB 17; Length 1990;
Best Local Similarity 89.4%; Pred. No. 1.8e-92;
Matches 363; Conservative 0; Mismatches 40; Indels 3; Gaps 1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||| |||||||||||||| |||||||||||||||||||||||||||||||||||||
Db       1990 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 1931

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||||
Db       1930 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 1871

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||| ||| ||||| |||||||||||||||||||| |||||||||
Db       1870 TGCACTGTCTCTGGTGGCTCCATCAGTCGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 1811
```

```
Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| ||||||||||||||| |  ||  | | ||||| |||||| ||||||||||
Db       1810 GGGAAGGGACTGGAGTGGATTGGGTATGTCTCTTACAGTGGGAGCACCTACTACAACCCC 1751

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db       1750 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 1691

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| |||||||||| |||||||||||||||||  |      ||
Db       1690 CTGAGCTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGATAAACTGGGG 1631

Qy        361 TT---CGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
               |    |||  ||||||||||||||||||||||||||||||||||
Db       1630 ATTGGAGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 1585
```

RESULT 6
US-10-693-629-43
; Sequence 43, Application US/10693629
; Publication No. US20040120948A1
; GENERAL INFORMATION:
; APPLICANT: KIRIN BEER KABUSHIKI KAISHA
; APPLICANT: MIKAYAMA, Toshifumi
; APPLICANT: YOSHIDA, Hitoshi
; APPLICANT: FORCE, Walker, R.
; APPLICANT: CHEN, Xingjie
; APPLICANT: TAKAHASHI, Nobuaki
; TITLE OF INVENTION: ANTI CD40 MONOCLONAL ANTIBODY
; FILE REFERENCE: 021286-0306473
; CURRENT APPLICATION NUMBER: US/10/693,629
; CURRENT FILING DATE: 2003-11-13
; PRIOR APPLICATION NUMBER: PCT/US01/13672
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: US09/844,684
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: JP2001/142482
; PRIOR FILING DATE: 2001-05-11
; PRIOR APPLICATION NUMBER: JP2001/310535
; PRIOR FILING DATE: 2001-10-05
; PRIOR APPLICATION NUMBER: US10/040,244
; PRIOR FILING DATE: 2001-10-26
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 43
; LENGTH: 481
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-693-629-43

Query Match 80.3%; Score 323.6; DB 17; Length 481;
Best Local Similarity 88.3%; Pred. No. 7.5e-92;
Matches 369; Conservative 0; Mismatches 34; Indels 15; Gaps 1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||| |||||||||||||| ||||||||||||||||||||||||||||||||||||
```

```
Db         52 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 111

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||
Db        112 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 171

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||| ||| |||||||||||||||||||||||||| |||||||||
Db        172 TGCACTGTCTCTGGTGGCTCCATCAGTGGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 231

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| |||||||||||||| | ||| || | ||||| |||||||||||||| ||
Db        232 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAATCCC 291

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        292 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 351

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA---------- 348
              ||||  |||||||||||| |||||||||| ||||||||||||||||||
Db        352 CTGAATTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGCCCCCTTGCAC 411

Qy        349 ---GTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                 |      || |||||| ||||||||||||||||||||||||||||||||||||||
Db        412 GGTGACTACAAATGGTTCCACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 469
```

```
RESULT 7
US-10-684-109-69
; Sequence 69, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
;  APPLICANT: DeVries, Peter J.
;  APPLICANT:  Green, Larry L.
;  APPLICANT:  Ostrow, David H.
;  APPLICANT:  Reilly, Edward B.
;  APPLICANT:  Wieler, James
;  TITLE OF INVENTION: Erythropoietin Receptor Binding
;  TITLE OF INVENTION:  Antibodies
;  FILE REFERENCE: 6989.US.02
;  CURRENT APPLICATION NUMBER: US/10/684,109
;  CURRENT FILING DATE:  2003-10-10
;  PRIOR APPLICATION NUMBER: 10/269,711
;  PRIOR FILING DATE: 2002-10-14
;  NUMBER OF SEQ ID NOS: 115
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 69
;   LENGTH: 1990
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-684-109-69

  Query Match             80.1%;  Score 322.8;  DB 17;  Length 1990;
  Best Local Similarity   88.9%;  Pred. No. 1.8e-91;
  Matches  361;  Conservative    0;  Mismatches   42;  Indels    3;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
```

```
                ||||| || |||||||||||||| ||||| ||||||||||||||||||||||||||||||||
Db            1 ATGAAGCATCTGTGGTTCTTCCTTCTCCTAGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy           61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
                |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||||
Db           61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy          121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
                ||| |||||| ||||| ||| ||||| |||||||||||||||||||| |||||||||
Db          121 TGCACTGTCTCTGGTGCCTCCATCAGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 180

Qy          181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
                || ||||| |||||||||||||| | ||| || | ||||| ||||||||||||||||
Db          181 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 240

Qy          241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
                |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db          241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy          301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
                ||||| |||||||||||| |||||||||| |||||||||||||||||||          ||
Db          301 CTGAGGTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAGCGACTGGGG 360

Qy          361 TTC---GACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                 ||   |||  ||||||||| |||||||||||||||||||||||||
Db          361 ATCGGGGACTACTGGGGCCAAGGAACCCTGGTCACCGTCTCCTCAG 406
```

```
RESULT 8
US-10-684-109-70/c
; Sequence 70, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
;  APPLICANT: DeVries, Peter J.
;  APPLICANT:  Green, Larry L.
;  APPLICANT:  Ostrow, David H.
;  APPLICANT:  Reilly, Edward B.
;  APPLICANT:  Wieler, James
;  TITLE OF INVENTION: Erythropoietin Receptor Binding
;  TITLE OF INVENTION:  Antibodies
;  FILE REFERENCE: 6989.US.02
;  CURRENT APPLICATION NUMBER: US/10/684,109
;  CURRENT FILING DATE:  2003-10-10
;  PRIOR APPLICATION NUMBER: 10/269,711
;  PRIOR FILING DATE: 2002-10-14
;  NUMBER OF SEQ ID NOS: 115
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 70
;   LENGTH: 1990
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-684-109-70

  Query Match             80.1%;  Score 322.8;  DB 17;  Length 1990;
  Best Local Similarity   88.9%;  Pred. No. 1.8e-91;
  Matches  361;  Conservative    0;  Mismatches   42;  Indels    3;  Gaps    1;
```

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||| || ||||||||||||||| ||||| ||||||||||||||||||||||||||||||
Db       1990 ATGAAGCATCTGTGGTTCTTCCTTCTCCTAGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 1931

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||||
Db       1930 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 1871

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||  ||| ||||| |||||||||||||||||||| |||||||||
Db       1870 TGCACTGTCTCTGGTGCCTCCATCAGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 1811

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| |||||||||||||| | ||| || | ||||| ||||||||||||||||
Db       1810 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 1751

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db       1750 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 1691

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||| |||||||||| |||||||||| |||||||||||||||||          ||
Db       1690 CTGAGGTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAGCGACTGGGG 1631

Qy        361 TTC---GACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
               ||   |||  ||||||||| ||||||||||||||||||||||||
Db       1630 ATCGGGGACTACTGGGGCCAAGGAACCCTGGTCACCGTCTCCTCAG 1585
```

```
RESULT 9
US-10-399-518-94
; Sequence 94, Application US/10399518
; Publication No. US20040091475A1
; GENERAL INFORMATION:
;  APPLICANT: TSUCHIYA, MASAYUKI
;  APPLICANT:  OHTOMO, TOSHIHIKO
;  APPLICANT:  YABUTA, NAOHIRO
;  APPLICANT:  TSUNODA, HIROYUKI
;  APPLICANT:  ORITA, TETSURO
;  TITLE OF INVENTION: DEGRADED TPO AGONIST ANTIBODY
;  FILE REFERENCE: 065678/0111
;  CURRENT APPLICATION NUMBER: US/10/399,518
;  CURRENT FILING DATE:  2003-09-25
;  PRIOR APPLICATION NUMBER: PCT/JP01/03288
;  PRIOR FILING DATE: 2001-04-17
;  PRIOR APPLICATION NUMBER: JP 2001-277314
;  PRIOR FILING DATE: 2001-09-12
;  PRIOR APPLICATION NUMBER: JP 2000-321821
;  PRIOR FILING DATE: 2000-10-20
;  NUMBER OF SEQ ID NOS: 183
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 94
;   LENGTH: 426
;   TYPE: DNA
;   ORGANISM: Mus sp.
;   FEATURE:
;   NAME/KEY: CDS
```

```
;   LOCATION: (12)..(410)
;   OTHER INFORMATION: 12E10H, H chain V region
US-10-399-518-94

  Query Match             79.4%;  Score 319.8;  DB 16;  Length 426;
  Best Local Similarity   88.8%;  Pred. No. 1.2e-90;
  Matches  358;  Conservative    0;  Mismatches   42;  Indels    3;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||  ||||||||||||||  ||||||||||||||||||||||||||||||||||||
Db         12 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||  |||||||  ||||  ||||||||  ||||||||||||||||||||||||||||
Db         72 GTGCAGCTGCAGCAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||  ||||||  |||||   |||  |||||  ||||||||||||||||||  ||  |||||||||
Db        132 TGCACTGTCTCTGGTGACTCCATCAGTAGTTACTACTGGAGCTGGATTCGGCAGCCCCCA 191

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||  |||||  ||||||||||||||  |  |||  ||  |  |||||  ||||||||||||||||
Db        192 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 251

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||  ||||||||||||  ||||||||||||||||
Db        252 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAGCCAGTTCTCCCTGAAG 311

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||  ||||||||  ||||||||||||||||||        |
Db        312 CTGAGCTCTGTGACCGCCGCAGACACGGCCGTGTATTACTGTGCGAGAG---GGCGGTAC 368

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||   ||||||||  ||  |||  |||||||  ||||||||||
Db        369 TTCGATGTCTGGGGCCGTGGCACCATGGTCACTGTCTCCTCAG 411


RESULT 10
US-10-399-518-110
; Sequence 110, Application US/10399518
; Publication No. US20040091475A1
; GENERAL INFORMATION:
;  APPLICANT: TSUCHIYA, MASAYUKI
;  APPLICANT:  OHTOMO, TOSHIHIKO
;  APPLICANT:  YABUTA, NAOHIRO
;  APPLICANT:  TSUNODA, HIROYUKI
;  APPLICANT:  ORITA, TETSURO
;  TITLE OF INVENTION: DEGRADED TPO AGONIST ANTIBODY
;  FILE REFERENCE: 065678/0111
;  CURRENT APPLICATION NUMBER: US/10/399,518
;  CURRENT FILING DATE:  2003-09-25
;  PRIOR APPLICATION NUMBER: PCT/JP01/03288
;  PRIOR FILING DATE: 2001-04-17
;  PRIOR APPLICATION NUMBER: JP 2001-277314
;  PRIOR FILING DATE: 2001-09-12
;  PRIOR APPLICATION NUMBER: JP 2000-321821
;  PRIOR FILING DATE: 2000-10-20
```

```
;  NUMBER OF SEQ ID NOS: 183
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 110
;   LENGTH: 792
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: 12E10, Single chain
Fv
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (11)..(778)
US-10-399-518-110

  Query Match             79.4%;  Score 319.8;  DB 16;  Length 792;
  Best Local Similarity   88.8%;  Pred. No. 1.3e-90;
  Matches  358;  Conservative    0;  Mismatches   42;  Indels    3;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||| |||||||||||||| |||||||||||||||||||||||||||||||||||
Db         11 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 70

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||||||| |||| |||||||| |||||||||||||||||||||||||||||
Db         71 GTGCAGCTGCAGCAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 130

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||  ||| ||||| |||||||||||||||||| || |||||||||
Db        131 TGCACTGTCTCTGGTGACTCCATCAGTAGTTACTACTGGAGCTGGATTCGGCAGCCCCCA 190

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| |||||||||||||||| | ||| || | ||||| ||||||||||||||||
Db        191 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 250

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| |||||||||||| ||||||||||||||||
Db        251 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAGCCAGTTCTCCCTGAAG 310

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||||||| |||||||| ||||||||||||||||||        |
Db        311 CTGAGCTCTGTGACCGCCGCAGACACGGCCGTGTATTACTGTGCGAGAG---GGCGGTAC 367

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||   ||||||||  || ||| ||||||| |||||||||
Db        368 TTCGATGTCTGGGGCCGTGGCACCATGGTCACTGTCTCCTCAG 410


RESULT 11
US-10-399-518-113
; Sequence 113, Application US/10399518
; Publication No. US20040091475A1
; GENERAL INFORMATION:
;  APPLICANT: TSUCHIYA, MASAYUKI
;  APPLICANT:  OHTOMO, TOSHIHIKO
;  APPLICANT:  YABUTA, NAOHIRO
;  APPLICANT:  TSUNODA, HIROYUKI
;  APPLICANT:  ORITA, TETSURO
```

; TITLE OF INVENTION: DEGRADED TPO AGONIST ANTIBODY
; FILE REFERENCE: 065678/0111
; CURRENT APPLICATION NUMBER: US/10/399,518
; CURRENT FILING DATE: 2003-09-25
; PRIOR APPLICATION NUMBER: PCT/JP01/03288
; PRIOR FILING DATE: 2001-04-17
; PRIOR APPLICATION NUMBER: JP 2001-277314
; PRIOR FILING DATE: 2001-09-12
; PRIOR APPLICATION NUMBER: JP 2000-321821
; PRIOR FILING DATE: 2000-10-20
; NUMBER OF SEQ ID NOS: 183
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 113
;   LENGTH: 822
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: sc12E10,
;   OTHER INFORMATION: single chain Fv
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (11)..(808)
US-10-399-518-113

  Query Match   79.4%; Score 319.8; DB 16; Length 822;
  Best Local Similarity   88.8%; Pred. No. 1.3e-90;
  Matches 358; Conservative   0; Mismatches   42; Indels   3; Gaps   1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||  ||||||||||||||  ||||||||||||||||||||||||||||||||||
Db         11 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 70

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||  |||||||  ||||  ||||||||  ||||||||||||||||||||||||||||
Db         71 GTGCAGCTGCAGCAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 130

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||  ||||||  |||||  |||  |||||  ||||||||||||||||||  ||  |||||||||
Db        131 TGCACTGTCTCTGGTGACTCCATCAGTAGTTACTACTGGAGCTGGATTCGGCAGCCCCCA 190

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||  |||||  ||||||||||||||||  |  |||  ||  |  |||||  ||||||||||||||||
Db        191 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 250

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||  ||||||||||||  ||||||||||||||||
Db        251 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAGCCAGTTCTCCCTGAAG 310

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              ||||||||||||||||||||  ||||||||  ||||||||||||||||||||        |
Db        311 CTGAGCTCTGTGACCGCCGCAGACACGGCCGTGTATTACTGTGCGAGAG---GGCGGTAC 367

Qy        361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
              |||||   ||||||||  ||  |||  |||||||  |||||||||
Db        368 TTCGATGTCTGGGGCCGTGGCACCATGGTCACTGTCTCCTCAG 410
```

RESULT 12
US-10-292-088-85
; Sequence 85, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
; APPLICANT: BEDIAN, VAHE
; APPLICANT: GLADUE, RONALD P.
; APPLICANT: CORVALAN, JOSE
; APPLICANT: JIA, XIAO-CHI
; APPLICANT: FENG, XIAO
; TITLE OF INVENTION: ANTIBODIES TO CD40
; FILE REFERENCE: ABX-PF/3 US
; CURRENT APPLICATION NUMBER: US/10/292,088
; CURRENT FILING DATE: 2003-03-14
; PRIOR APPLICATION NUMBER: 60/348,980
; PRIOR FILING DATE: 2001-11-09
; NUMBER OF SEQ ID NOS: 147
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 85
; LENGTH: 1401
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-292-088-85

Query Match 79.2%; Score 319; DB 15; Length 1401;
Best Local Similarity 87.4%; Pred. No. 2.7e-90;
Matches 368; Conservative 0; Mismatches 35; Indels 18; Gaps 1;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||  ||||||||||||||  ||||||||||||||||||||||||||||||||||
Db          1 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||  |||  |||  ||||  ||||||||  ||||||||||||||||||||||||||||||
Db         61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||  ||||||  ||||||  |||  ||||  ||||||||||||||||||||||  |||||||||
Db        121 TGCACTGTCTCTGGTGGCTCCATCAGAGGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              ||  |||||  ||||||||||||||||  |  |||  ||  |  |||||  ||||||||||||||||||
Db        181 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||||||||||||||||||||||  ||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA------------ 348
              |||||  ||||||||||  ||||||||||  ||||||||||||||||||
Db        301 CTGAGTTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAAGGGGGGGCCTC 360

Qy        349 ------GTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                    |        |||||||  ||||||||||||||||||||||||||||||||||||||
Db        361 TACGGTGACTACGGCTGGTTCGCCCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 420

Qy        403 G 403
```

Db 421 G 421

RESULT 13
US-10-684-109-86
; Sequence 86, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
; APPLICANT: DeVries, Peter J.
; APPLICANT: Green, Larry L.
; APPLICANT: Ostrow, David H.
; APPLICANT: Reilly, Edward B.
; APPLICANT: Wieler, James
; TITLE OF INVENTION: Erythropoietin Receptor Binding
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: 6989.US.02
; CURRENT APPLICATION NUMBER: US/10/684,109
; CURRENT FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: 10/269,711
; PRIOR FILING DATE: 2002-10-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 86
; LENGTH: 1990
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-684-109-86

Query Match 78.5%; Score 316.4; DB 17; Length 1990;
Best Local Similarity 87.9%; Pred. No. 1.9e-89;
Matches 357; Conservative 0; Mismatches 46; Indels 3; Gaps 1;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||| || ||||||||||||||| ||||||||||||||||||||||||||||||||||||
Db          1 ATGAAGCATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||||
Db         61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| ||||| ||| ||||| |||||||||||||||||||| |||||||||
Db        121 TGCACTGTCTCTGGTGCCTCCATCAGTAATTACTACTGGAGCTGGATCCGGCAGCCCCCA 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| ||||||||||||||| |  ||  | | ||||| || ||  ||||||||||
Db        181 GGGAAGGGACTGGAGTGGATTGGGTATGTCTCTTACAGTGGGAGTACGTACTACAACCCC 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||| |||||||||||| ||||| ||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGGGTCGAGTCACCATGTCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| |||||||||| |||||||||||||||||| ||      ||
Db        301 CTGAGCTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAAAAACTGGGG 360
```

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Qy        361 TT---CGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                  |    |||  |||||||||||||||||||||||||||||||||
Db        361 ATTGGAGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 406
```

RESULT 14
US-10-684-109-87/c
; Sequence 87, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
; APPLICANT: DeVries, Peter J.
; APPLICANT: Green, Larry L.
; APPLICANT: Ostrow, David H.
; APPLICANT: Reilly, Edward B.
; APPLICANT: Wieler, James
; TITLE OF INVENTION: Erythropoietin Receptor Binding
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: 6989.US.02
; CURRENT APPLICATION NUMBER: US/10/684,109
; CURRENT FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: 10/269,711
; PRIOR FILING DATE: 2002-10-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 87
; LENGTH: 1990
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-684-109-87

Query Match 78.5%; Score 316.4; DB 17; Length 1990;
Best Local Similarity 87.9%; Pred. No. 1.9e-89;
Matches 357; Conservative 0; Mismatches 46; Indels 3; Gaps 1;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||| || ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db       1990 ATGAAGCATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 1931

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||
Db       1930 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 1871

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||  ||| |||||  |||||||||||||||||||| |||||||||
Db       1870 TGCACTGTCTCTGGTGCCTCCATCAGTAATTACTACTGGAGCTGGATCCGGCAGCCCCCA 1811

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| ||||||||||||||| |  ||  | | ||||| || ||  ||||||||||
Db       1810 GGGAAGGGACTGGAGTGGATTGGGTATGTCTCTTACAGTGGGAGTACGTACTACAACCCC 1751

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              ||||||||| |||||||||||| ||||| ||||||||||||||||||||||||||||||
Db       1750 TCCCTCAAGGGTCGAGTCACCATGTCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 1691

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||| |||||||||| |||||||||||||||||| ||      ||
Db       1690 CTGAGCTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAAAAACTGGGG 1631
```

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Qy        361 TT---CGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                  |    |||  |||||||||||||||||||||||||||||||||
Db       1630 ATTGGAGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 1585


RESULT 15
US-10-292-088-69
; Sequence 69, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
;  APPLICANT: BEDIAN, VAHE
;  APPLICANT:  GLADUE, RONALD P.
;  APPLICANT:  CORVALAN, JOSE
;  APPLICANT:  JIA, XIAO-CHI
;  APPLICANT:  FENG, XIAO
;  TITLE OF INVENTION: ANTIBODIES TO CD40
;  FILE REFERENCE: ABX-PF/3 US
;  CURRENT APPLICATION NUMBER: US/10/292,088
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: 60/348,980
;  PRIOR FILING DATE: 2001-11-09
;  NUMBER OF SEQ ID NOS: 147
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 69
;   LENGTH: 1401
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-292-088-69

  Query Match             78.4%;  Score 315.8;  DB 15;  Length 1401;
  Best Local Similarity   86.9%;  Pred. No. 2.8e-89;
  Matches  366;  Conservative    0;  Mismatches   37;  Indels   18;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              |||||||| ||||||||||||| ||||||||||||||||||||||||||||||||||||
Db          1 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              |||||||| ||| ||| |||| |||||||| ||||||||||||||||||||||||||||
Db         61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||| |||||| |||||| ||| |||| |||||||||||||||||||||| ||||||||
Db        121 TGCACTGTCTCTGGTGGCTCCATCAGAGGTTACTACTGGAGCTGGATCCGGCAGCCCCCT 180

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||| |||||||||||||| | ||| || | ||||| ||||||||||||||||
Db        181 GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 240

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA---------- 348
              |||| |||||||||||| |||||||||| |||||||| |||||||||
Db        301 CTGAACTCTGTGACCGCTGCGGACACGGCCGTGTATTATTGTGCGAGAAAGGGGGGCCTC 360
```

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Qy        349 ------GTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                      |       ||||||| ||||||||||||||||||||||||||||||||||||
Db        361 TACGGTGACTACGGCTGGTTCGCCCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 420

Qy        403 G 403
                |
Db        421 G 421
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Search completed: December 3, 2004, 02:43:17
Job time : 309.977 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03 ; Search time 2097.71 Seconds
(without alignments)
7000.593 Million cell updates/sec

Title: US-08-728-463B-205
Perfect score: 403
Sequence: 1 ATGAAACACCTGTGGTTCTT.....CCTGGTCACCGTCTCCTCAG 403

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 32822875 seqs, 18219865908 residues

Total number of hits satisfying chosen parameters: 65645750

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : EST:*
1: gb_est1:*
2: gb_est2:*
3: gb_htc:*
4: gb_est3:*
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7: gb_est6:*
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9: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	366.8	91.0	798	4	BI771905	BI771905 603058919
2	362.2	89.9	1097	2	BF974768	BF974768 602245417
3	359	89.1	980	5	BQ705925	BQ705925 AGENCOURT
4	356.6	88.5	980	5	BQ706553	BQ706553 AGENCOURT
5	348.8	86.6	931	5	BQ878887	BQ878887 AGENCOURT
6	348.6	86.5	721	4	BG686995	BG686995 602650991
7	348.6	86.5	937	2	BF663511	BF663511 602144676
8	345.8	85.8	834	4	BG758193	BG758193 602712365
9	345.2	85.7	931	5	BQ707803	BQ707803 AGENCOURT
10	345	85.6	570	4	BG684621	BG684621 602636395
11	345	85.6	894	4	BG757611	BG757611 602714787
12	344.2	85.4	632	4	BG341565	BG341565 602463671
13	344	85.4	701	2	BE560828	BE560828 601346293
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15	342.4	85.0	494	2	AW732723	AW732723 bb12b11.y
16	342.4	85.0	505	4	BM051752	BM051752 603638570
17	342.4	85.0	532	2	BE268243	BE268243 601125674
18	342.4	85.0	566	2	BE297872	BE297872 601174405
19	342.4	85.0	610	2	BE268381	BE268381 601125007
20	342.4	85.0	628	2	BE514064	BE514064 601316566
21	342.4	85.0	629	2	BE267595	BE267595 601124386
22	342.4	85.0	630	4	BI226863	BI226863 602951958
23	342.4	85.0	643	2	BE397780	BE397780 601289535
24	342.4	85.0	659	2	BE514250	BE514250 601315751
25	342.4	85.0	676	2	BE513694	BE513694 601315444
26	342.4	85.0	683	2	BE513942	BE513942 601315167
27	342.4	85.0	716	2	BE396528	BE396528 601288939
28	342.4	85.0	725	2	BE513429	BE513429 601315782
29	342.4	85.0	731	2	BE397175	BE397175 601290895
30	342.4	85.0	744	2	BE268552	BE268552 601125344
31	342.4	85.0	749	2	BE514419	BE514419 601315652
32	342.4	85.0	752	2	BE514251	BE514251 601315767
33	342.4	85.0	849	4	BI225669	BI225669 602949043
34	342.4	85.0	866	4	BI225138	BI225138 602949807
35	342.4	85.0	871	4	BM051499	BM051499 603638183
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37	342.4	85.0	958	2	BE561032	BE561032 601344644
38	342.4	85.0	1253	2	BE562381	BE562381 601344926
39	341.4	84.7	566	2	BE559735	BE559735 601347628
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41	340.8	84.6	536	2	BE269628	BE269628 601185024
42	340.8	84.6	539	2	BE397594	BE397594 601289688
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44	340.8	84.6	552	2	BE268248	BE268248 601125687
45	340.8	84.6	579	2	BE269330	BE269330 601185203

ALIGNMENTS

RESULT 1
BI771905
LOCUS BI771905 798 bp mRNA linear EST 25-SEP-2001

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DEFINITION  603058919F1 NIH_MGC_122 Homo sapiens cDNA clone IMAGE:5208197 5',
            mRNA sequence.
ACCESSION   BI771905
VERSION     BI771905.1  GI:15763483
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 798)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Life Technologies, Inc.
             cDNA Library Preparation: Life Technologies, Inc.
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLAM11522  row: f  column: 06
            High quality sequence stop: 794.
FEATURES             Location/Qualifiers
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                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:5208197"
                     /lab_host="DH10B"
                     /clone_lib="NIH_MGC_122"
                     /note="Organ: pooled lung and spleen; Vector: pCMV-SPORT6;
                     Site_1: NotI; Site_2: EcoRV (destroyed); RNA source
                     anonymous pool of 24 week female lung, 16 week female
                     spleen, and 20-22 week male spleens.  Library is oligo-dT
                     primed and directionally cloned (EcoRV site is destroyed
                     upon  cloning).  Average insert size 1.4 kb, insert size
                     range 1-3 kb. Library is normalized and enriched for
                     full-length clones and was  constructed by C. Gruber
                     (Invitrogen).  Research Genetics tracking  code 026. Note:
                     this is a NIH_MGC Library."
ORIGIN

  Query Match             91.0%;  Score 366.8;  DB 4;  Length 798;
  Best Local Similarity   94.7%;  Pred. No. 5.6e-95;
  Matches  396;  Conservative    0;  Mismatches    7;  Indels   15;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         25 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 84

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         85 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 144

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        145 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 204

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
                || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        205 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 264

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
                |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        265 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 324

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAG---------- 349
                ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        325 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGGGGGTAACTGG 384

Qy        350 ----TAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                    |   || ||||||||||||||||||||||||||||||||||||||||||||||||
Db        385 CCACGATACAACTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 442


RESULT 2
BF974768
LOCUS       BF974768                1097 bp    mRNA    linear   EST 22-JAN-2001
DEFINITION  602245417F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4336397 5',
            mRNA sequence.
ACCESSION   BF974768
VERSION     BF974768.1  GI:12341983
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 1097)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1209  row: a  column: 06
            High quality sequence stop: 646.
FEATURES             Location/Qualifiers
     source          1. .1097
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:4336397"
                     /tissue_type="primary B-cells from tonsils (cell line)"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_48"
                     /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
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Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."

ORIGIN

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  Query Match             89.9%;  Score 362.2;  DB 2;  Length 1097;
  Best Local Similarity   96.0%;  Pred. No. 1.3e-93;
  Matches  383;  Conservative    0;  Mismatches   13;  Indels    3;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         15 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 74

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         75 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 134

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        135 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 194

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        195 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 254

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        255 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 314

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTG- 359
              |||||||||||||||||||||||||||||||||||||||||||||||||| ||    | |
Db        315 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGCAAGGTCTGGG 374

Qy        360 --GTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTC 396
                |   |||  ||||||||||||||||||||||||||||
Db        375 CCGGATGACTACTGGGGCCAGGGAACCCTGGTCACCGTC 413
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RESULT 3
BQ705925
LOCUS BQ705925 980 bp mRNA linear EST 16-JUL-2002
DEFINITION AGENCOURT_7976138 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6214792
5', mRNA sequence.
ACCESSION BQ705925
VERSION BQ705925.1 GI:21844824
KEYWORDS EST.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 980)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.

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  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Dr. Mark Watson
             cDNA Library Preparation: Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Agencourt Bioscience Corporation
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM2382  row: k  column: 17
            High quality sequence start: 13
            High quality sequence stop: 510.
FEATURES             Location/Qualifiers
     source          1. .980
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:6214792"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_113"
                     /note="Organ: spleen; Vector: pOTB7; Site_1: XhoI; Site_2:
                     EcoRI; cDNA made by oligo-dT priming. Directionally cloned
                     into EcoRI/XhoI sites using the following 5' adaptor:
                     GGCACGAG(G). Library constructed  by Ling Hong in the
                     laboratory of Gerald M. Rubin (University of  California,
                     Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
                     Superscript II RT (Life Technologies). Note: this is a
                     NIH_MGC Library."
ORIGIN

  Query Match             89.1%;  Score 359;  DB 5;  Length 980;
  Best Local Similarity   93.3%;  Pred. No. 1e-92;
  Matches  393;  Conservative    0;  Mismatches   10;  Indels   18;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||| ||||||||||||||||||||
Db         33 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTTCCAGATGGGTCCTGTCCCAG 92

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         93 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 152

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        153 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 212

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        213 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 272

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        273 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 332

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT------- 353
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Db        333 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGACGGCTCGCATTA 392

Qy        354 -----------TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
                          |   ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        393 GGACGCTCCGGTGTCTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 452

Qy        403 G 403
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Db        453 G 453
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RESULT 4
BQ706553

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LOCUS       BQ706553                980 bp    mRNA    linear   EST 16-JUL-2002
DEFINITION  AGENCOURT_8487920 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6300742
            5', mRNA sequence.
ACCESSION   BQ706553
VERSION     BQ706553.1  GI:21845452
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 980)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Dr. Mark Watson
             cDNA Library Preparation: Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Agencourt Bioscience Corporation
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM2515  row: h  column: 23
            High quality sequence stop: 479.
FEATURES             Location/Qualifiers
     source          1. .980
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:6300742"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_113"
                     /note="Organ: spleen; Vector: pOTB7; Site_1: XhoI; Site_2:
                     EcoRI; cDNA made by oligo-dT priming. Directionally cloned
                     into EcoRI/XhoI sites using the following 5' adaptor:
                     GGCACGAG(G). Library constructed  by Ling Hong in the
                     laboratory of Gerald M. Rubin (University of  California,
                     Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
                     Superscript II RT (Life Technologies). Note: this is a
                     NIH_MGC Library."
ORIGIN
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  Query Match             88.5%;  Score 356.6;  DB 5;  Length 980;
  Best Local Similarity   93.9%;  Pred. No. 5.2e-92;
  Matches  384;  Conservative    0;  Mismatches   19;  Indels    6;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         19 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 78

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         79 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 138

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 198

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || |||||||||||||||||||||||||||||||||||||||||||| ||||||||||||
Db        199 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACGAACTACAACCCG 258

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        259 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTGTCCCTGAAC 318

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA------GTAATT 354
              |||||||||||||||||||||||||||||||||||||||||||| ||      || ||
Db        319 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGCGATGTGTCGTTATA 378

Qy        355 AATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                  | || |    |||||||||| ||||||||||||||||||||
Db        379 GGGAAGATCCAGTATTGGGGCCAGGGCACCCTGGTCACCGTCTCCTCAG 427


RESULT 5
BQ878887
LOCUS       BQ878887                 931 bp    mRNA    linear   EST 16-AUG-2002
DEFINITION  AGENCOURT_8119707 Lupski_dorsal_root_ganglion Homo sapiens cDNA
            clone IMAGE:6177774 5', mRNA sequence.
ACCESSION   BQ878887
VERSION     BQ878887.1  GI:22270895
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 931)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Dr. James R. Lupski
             cDNA Library Preparation: Life Technologies, Inc.
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Agencourt Bioscience Corporation
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
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            http://image.llnl.gov
            Plate: LLAM13556  row: e  column: 07
            High quality sequence start: 18
            High quality sequence stop: 705.
FEATURES              Location/Qualifiers
     source           1. .931
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                      /db_xref="taxon:9606"
                      /clone="IMAGE:6177774"
                      /sex="male"
                      /tissue_type="dorsal root ganglia"
                      /dev_stage="adult, 36 yr"
                      /lab_host="DH10B"
                      /clone_lib="Lupski_dorsal_root_ganglion"
                      /note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
                      NotI; Site_2: SalI; cDNA made by oligo-dT priming.
                      Directionally cloned using the following adaptors:
                      5'-TCGACCCACGCGTCCG-3' and
                      5'-GACTAGTTCTAGATCGCGAGCGGCCGCCCT(15)-3'. Size selected >
                      1 kb for average insert length 1.7 kb. This is a primary
                      library, non-amplified. Library constructed by Life
                      Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor
                      College of Medicine) and is available through Life
                      Technologies."
ORIGIN

  Query Match             86.6%;  Score 348.8;  DB 5;  Length 931;
  Best Local Similarity   92.5%;  Pred. No. 9.3e-90;
  Matches  381;  Conservative    0;  Mismatches   22;  Indels    9;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         37 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 96

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         97 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 156

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||| |||||||||||| || ||||||||||||||||||||||||||||||
Db        157 TGCGCTGTCTATAGTGGGTCCTTCACTGCTTACTACTGGAGCTGGATCCGCCAGCCCCCA 216

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || |||||||||||||||||||||||||||||| ||||||| ||||||||||||||||||
Db        217 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCTTAGTGGAGGCACCAACTACAACCCG 276

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        277 TCCCTCAGGAGTCGAGTCACCATTTCAGCAGACACGTCCAAGAACCAGGTCTCCCTGAAG 336

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||||||||||||||||||||| ||||||||||||||||||   |   || |
Db        337 CTGAGCTCTGTGACCGCCGCGGACACGGCTCTGTATTACTGTGCGAGAGGTGTGCTTTCG 396

Qy        361 ---------TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db        397 TTGTACTACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 448


RESULT 6
BG686995
LOCUS       BG686995                721 bp    mRNA    linear   EST 01-MAY-2001
DEFINITION  602650991F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4763158 5',
            mRNA sequence.
ACCESSION   BG686995
VERSION     BG686995.1  GI:13918392
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 721)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1618  row: f  column: 23
            High quality sequence stop: 721.
FEATURES             Location/Qualifiers
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                     /clone="IMAGE:4763158"
                     /tissue_type="primary B-cells from tonsils (cell line)"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_48"
                     /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
                     Site_2: EcoRI; cDNA made by oligo-dT priming.
                     Directionally cloned into EcoRI/XhoI sites using the
                     following 5' adaptor: GGCACGAG(G). Size-selected >500bp
                     for average insert size 1.8kb. Library constructed by Ling
                     Hong in the laboratory of Gerald M. Rubin (University of
                     California, Berkeley) using  ZAP-cDNA synthesis kit
                     (Stratagene) and Superscript II RT (Life Technologies).
                     Note: this is a NIH_MGC Library."
ORIGIN

  Query Match           86.5%;  Score 348.6;  DB 4;  Length 721;
  Best Local Similarity   98.9%;  Pred. No. 1e-89;
  Matches  351;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          7 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 66
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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db         67 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 126

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        127 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 186

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        187 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 246

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        247 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 306

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTA 355
              |||||||||||||||||||||||||||||||||||||||||||||||||||  |||
Db        307 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTGTTA 361
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RESULT 7
BF663511
LOCUS       BF663511                937 bp    mRNA    linear   EST 21-DEC-2000
DEFINITION  602144676F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4297794 5',
            mRNA sequence.
ACCESSION   BF663511
VERSION     BF663511.1  GI:11937406
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 937)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1152  row: h  column: 19
            High quality sequence stop: 711.
FEATURES             Location/Qualifiers
     source          1. .937
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:4297794"
                     /tissue_type="primary B-cells from tonsils (cell line)"
                     /lab_host="DH10B (phage-resistant)"
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/clone_lib="NIH_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
ORIGIN

Query Match 86.5%; Score 348.6; DB 2; Length 937;
Best Local Similarity 98.9%; Pred. No. 1.1e-89;
Matches 351; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          7 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 66

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         67 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 126

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        127 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 186

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        187 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 246

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        247 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 306

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTA 355
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Db        307 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTGTTA 361
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RESULT 8
BG758193
LOCUS BG758193 834 bp mRNA linear EST 15-MAY-2001
DEFINITION 602712365F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4852505 5',
mRNA sequence.
ACCESSION BG758193
VERSION BG758193.1 GI:14068846
KEYWORDS EST.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 834)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM1697 row: a column: 18
High quality sequence stop: 817.

FEATURES Location/Qualifiers
source 1. .834
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4852505"
/tissue_type="primary B-cells from tonsils (cell line)"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."

ORIGIN

Query Match 85.8%; Score 345.8; DB 4; Length 834;
Best Local Similarity 99.4%; Pred. No. 6.7e-89;
Matches 347; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db          3 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 62

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db         63 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 122

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        123 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 182

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        183 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 242

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        243 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 302

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAG 349
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Db        303 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAG 351


RESULT 9
BQ707803
LOCUS       BQ707803                 931 bp    mRNA    linear   EST 16-JUL-2002
DEFINITION  AGENCOURT_8353015 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6278020
            5', mRNA sequence.
ACCESSION   BQ707803
VERSION     BQ707803.1  GI:21846702
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 931)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Dr. Mark Watson
             cDNA Library Preparation: Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Agencourt Bioscience Corporation
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM2465  row: f  column: 05
            High quality sequence stop: 736.
FEATURES             Location/Qualifiers
     source          1. .931
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:6278020"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_113"
                     /note="Organ: spleen; Vector: pOTB7; Site_1: XhoI; Site_2:
                     EcoRI; cDNA made by oligo-dT priming. Directionally cloned
                     into EcoRI/XhoI sites using the following 5' adaptor:
                     GGCACGAG(G). Library constructed  by Ling Hong in the
                     laboratory of Gerald M. Rubin (University of  California,
                     Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
                     Superscript II RT (Life Technologies). Note: this is a
                     NIH_MGC Library."
ORIGIN

  Query Match             85.7%;  Score 345.2;  DB 5;  Length 931;
  Best Local Similarity   90.7%;  Pred. No. 1e-88;
  Matches  390;  Conservative    0;  Mismatches   13;  Indels   27;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 85

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db          86 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 145

Qy         121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
                |||||||||  ||||  ||||||||||||||||||||||||||||||||||||||||||||
Db         146 TGCGCTGTCCATGGCGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 205

Qy         181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
                ||  ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         206 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 265

Qy         241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db         266 TCCCTCAAGAGTCGAGTCAACATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 325

Qy         301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAG------------- 347
                |||||||||||||||||||||||||||||||||||||||||||||
Db         326 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGACGACATCGGCTA 385

Qy         348 --------------AGTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
                             | |   |  ||||||||||||||||||||||||||||||||||||
Db         386 TGGTTCGGGGACTTATTCTGTTCCTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 445

Qy         394 GTCTCCTCAG 403
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Db         446 GTGTCCTCAG 455
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RESULT 10
BG684621
LOCUS       BG684621                 570 bp    mRNA    linear   EST 01-MAY-2001
DEFINITION  602636395F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4764118 5',
            mRNA sequence.
ACCESSION   BG684621
VERSION     BG684621.1  GI:13916018
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 570)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1620  row: n  column: 23
            High quality sequence stop: 561.
FEATURES             Location/Qualifiers
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                     /organism="Homo sapiens"
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                     /tissue_type="primary B-cells from tonsils (cell line)"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_48"
                     /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
                     Site_2: EcoRI; cDNA made by oligo-dT priming.
                     Directionally cloned into EcoRI/XhoI sites using the
                     following 5' adaptor: GGCACGAG(G). Size-selected >500bp
                     for average insert size 1.8kb. Library constructed by Ling
                     Hong in the laboratory of Gerald M. Rubin (University of
                     California, Berkeley) using  ZAP-cDNA synthesis kit
                     (Stratagene) and Superscript II RT (Life Technologies).
                     Note: this is a NIH_MGC Library."
ORIGIN

  Query Match             85.6%;  Score 345;  DB 4;  Length 570;
  Best Local Similarity   91.4%;  Pred. No. 1.1e-88;
  Matches  382;  Conservative    0;  Mismatches   21;  Indels   15;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         51 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 110

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        111 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 170

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        171 TGCGCTGTCTATGGTGGGTCCTTCAGTGATTACTACTGGAGCTGGATCCGCCAGCCCCCA 230

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        231 NGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 290

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        291 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 350

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA---------- 348
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Db        351 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAAGCGATGGCTAC 410

Qy        349 ---GTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db        411 AATTTCGATGATGCTTTTGATATCTGGGGCCAAGGGACAATGGTCACCGTCTCTTCAG 468


RESULT 11
BG757611
LOCUS       BG757611                 894 bp    mRNA    linear   EST 15-MAY-2001
DEFINITION  602714787F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4855101 5',
            mRNA sequence.
ACCESSION   BG757611
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VERSION     BG757611.1  GI:14068264
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 894)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1703  row: m  column: 22
            High quality sequence stop: 842.
FEATURES             Location/Qualifiers
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                     /clone="IMAGE:4855101"
                     /tissue_type="primary B-cells from tonsils (cell line)"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_48"
                     /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
                     Site_2: EcoRI; cDNA made by oligo-dT priming.
                     Directionally cloned into EcoRI/XhoI sites using the
                     following 5' adaptor: GGCACGAG(G). Size-selected >500bp
                     for average insert size 1.8kb. Library constructed by Ling
                     Hong in the laboratory of Gerald M. Rubin (University of
                     California, Berkeley) using ZAP-cDNA synthesis kit
                     (Stratagene) and Superscript II RT (Life Technologies).
                     Note: this is a NIH_MGC Library."
ORIGIN
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Query Match 85.6%; Score 345; DB 4; Length 894;
Best Local Similarity 91.4%; Pred. No. 1.2e-88;
Matches 382; Conservative 0; Mismatches 21; Indels 15; Gaps 1;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db         51 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 110

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        111 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 170

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        171 TGCGCTGTCTATGGTGGGTCCTTCAGTGATTACTACTGGAGCTGGATCCGCCAGCCCCCA 230
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        231 NGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 290

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA------------ 348
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Db        351 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAAGCGATGGCTAC 410

Qy        349 ---GTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db        411 AATTTCGATGATGCTTTTGATATCTGGGGCCAAGGGACAATGGTCACCGTCTCTTCAG 468
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RESULT 12
BG341565
LOCUS       BG341565                632 bp    mRNA    linear   EST 27-FEB-2001
DEFINITION  602463671F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4576696 5',
            mRNA sequence.
ACCESSION   BG341565
VERSION     BG341565.1  GI:13148003
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 632)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1289  row: m  column: 17
            High quality sequence stop: 630.
FEATURES             Location/Qualifiers
     source          1. .632
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:4576696"
                     /tissue_type="primary B-cells from tonsils (cell line)"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_48"
                     /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
                     Site_2: EcoRI; cDNA made by oligo-dT priming.
                     Directionally cloned into EcoRI/XhoI sites using the
                     following 5' adaptor: GGCACGAG(G). Size-selected >500bp
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for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."

ORIGIN

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  Query Match             85.4%;  Score 344.2;  DB 4;  Length 632;
  Best Local Similarity   91.6%;  Pred. No. 1.9e-88;
  Matches  380;  Conservative    0;  Mismatches   23;  Indels   12;  Gaps    1;

Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         36 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 95

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         96 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 155

Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        156 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 215

Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db        216 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 275

Qy        241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db        276 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAA 335

Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAA---- 356
              |||| |||| ||||||||||||||||||||||||||||||||||||     |
Db        336 CTGAACTCTCTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTGTGGGAGCTA 395

Qy        357 --------TTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
                      |   || ||   ||||||||  || ||  ||||||||||||| ||||
Db        396 CGGGAAGTTGCTTTTGATATCTGGGGCCGAGGGACAATGGTCACCGTCTCTTCAG 450
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RESULT 13
BE560828
LOCUS       BE560828                 701 bp    mRNA    linear   EST 15-AUG-2000
DEFINITION  601346293F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3679582 5',
            mRNA sequence.
ACCESSION   BE560828
VERSION     BE560828.1  GI:9804548
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 701)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
```

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM358 row: i column: 23
High quality sequence stop: 652.

FEATURES Location/Qualifiers
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/clone="IMAGE:3679582"
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/note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."

ORIGIN

Query Match 85.4%; Score 344; DB 2; Length 701;
Best Local Similarity 97.2%; Pred. No. 2.2e-88;
Matches 350; Conservative 0; Mismatches 10; Indels 0; Gaps 0;

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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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RESULT 14
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DEFINITION 601316029F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3634663 5', mRNA sequence.
ACCESSION BE513635
VERSION BE513635.1 GI:9720847
KEYWORDS EST.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 493)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM329 row: j column: 08
High quality sequence stop: 493.
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/clone="IMAGE:3634663"
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/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_8"
/note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
ORIGIN

Query Match 85.0%; Score 342.4; DB 2; Length 493;
Best Local Similarity 96.9%; Pred. No. 5.9e-88;
Matches 349; Conservative 0; Mismatches 11; Indels 0; Gaps 0;

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Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db        152 TGCGGTGTTTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 211

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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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RESULT 15
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DEFINITION  bb12b11.y1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:2959197 5'
            similar to gb:M54911_rna1 IG HEAVY CHAIN PRECURSOR V-II REGION
            (HUMAN);, mRNA sequence.
ACCESSION   AW732723
VERSION     AW732723.1  GI:7633060
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 494)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
             cDNA Library Preparation: Ling Hong/Rubin Laboratory
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Washington University Genome Sequencing Center
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            image.llnl.gov/image/html/iresources.shtml
            Seq primer: -40RP from Gibco
            High quality sequence stop: 489.
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                     /tissue_type="Burkitt lymphoma"
                     /lab_host="DH10B (phage-resistant)"
                     /clone_lib="NIH_MGC_8"
                     /note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2:
                     EcoRI; cDNA made by oligo-dT priming.  Directionally
                     cloned into EcoRI/XhoI sites using the following 5'
```

adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."

ORIGIN

Query Match 85.0%; Score 342.4; DB 2; Length 494;
Best Local Similarity 96.9%; Pred. No. 5.9e-88;
Matches 349; Conservative 0; Mismatches 11; Indels 0; Gaps 0;

```
Qy          1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         27 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 86

Qy         61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy        121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
              |||| ||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy        181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Qy        301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
              |||||||||||| |||||||||||||||||||||||||||||||||| |||| | ||
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Search completed: December 2, 2004, 20:56:25
Job time : 2101.71 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:02 ; Search time 2075.71 Seconds
(without alignments)
8839.572 Million cell updates/sec

Title: US-08-728-463B-206
Perfect score: 388
Sequence: 1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 4526729 seqs, 23644849745 residues

Total number of hits satisfying chosen parameters: 9053458

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
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9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	388	100.0	388	6	AR161375	AR161375 Sequence
2	388	100.0	388	6	AR369968	AR369968 Sequence
3	388	100.0	388	6	BD096602	BD096602 Transgeni

4	368.6	95.0	420	6	AR161429	AR161429 Sequence
5	368.6	95.0	420	6	AR369974	AR369974 Sequence
6	368.6	95.0	420	6	BD096608	BD096608 Transgeni
7	368.6	95.0	3819	6	AR161402	AR161402 Sequence
8	368.6	95.0	3819	6	AR369997	AR369997 Sequence
9	368.6	95.0	3819	6	BD096631	BD096631 Transgeni
10	367.2	94.6	824	9	AY510107	AY510107 Homo sapi
11	367.2	94.6	936	9	BC073764	BC073764 Homo sapi
12	364	93.8	974	6	AX305000	AX305000 Sequence
13	364	93.8	974	6	AX306529	AX306529 Sequence
14	364	93.8	974	6	BD131246	BD131246 Human mon
15	362.4	93.4	728	6	BD182353	BD182353 Anti CD40
16	362.4	93.4	728	6	AX327729	AX327729 Sequence
17	359.2	92.6	433	9	S59162	S59162 Ig V kappa
18	359.2	92.6	716	6	AX327727	AX327727 Sequence
19	351.2	90.5	439	6	AR161377	AR161377 Sequence
20	351.2	90.5	439	6	AR369970	AR369970 Sequence
21	351.2	90.5	439	6	BD096604	BD096604 Transgeni
22	339.8	87.6	986	9	BC067092	BC067092 Homo sapi
23	338.4	87.2	390	6	BD218865	BD218865 Monoclona
24	336.8	86.8	928	9	AK129817	AK129817 Homo sapi
25	335.6	86.5	384	6	I27685	I27685 Sequence 13
26	335.6	86.5	384	6	I55627	I55627 Sequence 13
27	335.6	86.5	384	9	HUMIGKAAA	L03678 Homo sapien
28	335.2	86.4	390	6	A44324	A44324 Sequence 2
29	335.2	86.4	390	6	A80257	A80257 Sequence 2
30	335.2	86.4	390	6	AR076530	AR076530 Sequence
31	334.8	86.3	388	9	HSIGKLV58	X72479 H.sapiens m
32	333.6	86.0	711	6	CQ795434	CQ795434 Sequence
33	333.6	86.0	953	9	BC005332	BC005332 Homo sapi
34	333.6	86.0	962	9	BC034141	BC034141 Homo sapi
35	332	85.6	390	9	HSFOG1L	X64163 H.sapiens m
36	332	85.6	827	9	AY510106	AY510106 Homo sapi
37	332	85.6	979	9	BC073763	BC073763 Homo sapi
38	331.6	85.5	387	6	BD218850	BD218850 Monoclona
39	330.4	85.2	438	6	BD015544	BD015544 Human mon
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42	328.8	84.7	396	9	HSPBLIGVD	Z27173 H.sapiens r
43	328.8	84.7	429	9	HUMIGKW	M74019 Homo sapien
44	327.4	84.4	379	9	HSIGKLV05	X72426 H.sapiens m
45	327.2	84.3	388	9	HSA548508	AJ548508 Homo sapi

ALIGNMENTS

RESULT 1
AR161375
LOCUS AR161375 388 bp DNA linear PAT 17-OCT-2001
DEFINITION Sequence 358 from patent US 6255458.
ACCESSION AR161375
VERSION AR161375.1 GI:16227235
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

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REFERENCE   1  (bases 1 to 388)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 358 03-JUL-2001;
FEATURES             Location/Qualifiers
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ORIGIN

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  Best Local Similarity   100.0%;  Pred. No. 3.8e-119;
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Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 2
AR369968
LOCUS       AR369968                388 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 206 from patent US 6300129.
ACCESSION   AR369968
VERSION     AR369968.1  GI:34606408
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 388)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 206 09-OCT-2001;
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ORIGIN

  Query Match             100.0%;  Score 388;  DB 6;  Length 388;
  Best Local Similarity   100.0%;  Pred. No. 3.8e-119;
  Matches  388;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388


RESULT 3
BD096602
LOCUS       BD096602                388 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
            antibodies.
ACCESSION   BD096602
VERSION     BD096602.1  GI:22642190
KEYWORDS    JP 2001527386-A/129.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 388)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 129 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
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PN JP 2001527386-A/129
PD 25-DEC-2001
PF 01-DEC-1997 JP 1998525687
PR 02-DEC-1996 US 08/758417
PI NILS LONBERG,ROBERT M KAY
PC C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
Strandedness: Single;
CC Topology: Linear;
CC Transgenic non-human animals capable of
producing heterologous
CC antibodies
FH Key Location/Qualifiers
FT source 1. .388
FT /organism='Unidentified'.

FEATURES Location/Qualifiers
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ORIGIN

Query Match 100.0%; Score 388; DB 6; Length 388;
Best Local Similarity 100.0%; Pred. No. 3.8e-119;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 4
AR161429
LOCUS AR161429 420 bp DNA linear PAT 17-OCT-2001

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DEFINITION  Sequence 420 from patent US 6255458.
ACCESSION   AR161429
VERSION     AR161429.1  GI:16227307
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 420)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 420 03-JUL-2001;
FEATURES             Location/Qualifiers
     source          1. .420
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             95.0%;  Score 368.6;  DB 6;  Length 420;
  Best Local Similarity   97.7%;  Pred. No. 1.3e-112;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||  ||||||||||  ||  ||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              |||  |||||  ||||||||||||||||||||||||||||||||||||||||  ||||||||
Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              ||||||||||||  ||||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              |||  ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394


RESULT 5
AR369974
LOCUS       AR369974                 420 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 220 from patent US 6300129.
ACCESSION   AR369974
VERSION     AR369974.1  GI:34606414
KEYWORDS    .
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SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 420)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 220 09-OCT-2001;
FEATURES             Location/Qualifiers
     source          1. .420
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             95.0%;  Score 368.6;  DB 6;  Length 420;
  Best Local Similarity   97.7%;  Pred. No. 1.3e-112;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||  |||||||||||  ||  ||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              |||  |||||  ||||||||||||||||||||||||||||||||||||  ||||||||
Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              ||||||||||||  ||||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              |||  ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394


RESULT 6
BD096608
LOCUS       BD096608                 420 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
            antibodies.
ACCESSION   BD096608
VERSION     BD096608.1  GI:22642196
KEYWORDS    JP 2001527386-A/135.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
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REFERENCE   1  (bases 1 to 420)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 135 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
            PN   JP 2001527386-A/135
            PD   25-DEC-2001
            PF   01-DEC-1997 JP 1998525687
            PR   02-DEC-1996 US    08/758417
            PI   NILS LONBERG,ROBERT M KAY
            PC   C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
            Strandedness: Single;
            CC   Topology: Linear;
            CC   Transgenic non-human animals capable of
            producing heterologous
            CC            antibodies
            FH   Key             Location/Qualifiers
            FT   source          1. .420
            FT                   /organism='Unidentified'.
FEATURES             Location/Qualifiers
     source          1. .420
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
ORIGIN

  Query Match             95.0%;  Score 368.6;  DB 6;  Length 420;
  Best Local Similarity   97.7%;  Pred. No. 1.3e-112;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||||| || ||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
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                ||| ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394


RESULT 7
AR161402
LOCUS       AR161402               3819 bp    DNA     linear   PAT 17-OCT-2001
DEFINITION  Sequence 393 from patent US 6255458.
ACCESSION   AR161402
VERSION     AR161402.1  GI:16227274
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 3819)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     High affinity human antibodies and human antibodies against digoxin
  JOURNAL   Patent: US 6255458-A 393 03-JUL-2001;
FEATURES             Location/Qualifiers
     source          1. .3819
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             95.0%;  Score 368.6;  DB 6;  Length 3819;
  Best Local Similarity   97.7%;  Pred. No. 1.4e-112;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
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Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| ||||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827
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RESULT 8
AR369997
LOCUS       AR369997                3819 bp    DNA     linear   PAT 12-SEP-2003
DEFINITION  Sequence 243 from patent US 6300129.
ACCESSION   AR369997
VERSION     AR369997.1  GI:34606437
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 3819)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals for producing heterologous antibodies
  JOURNAL   Patent: US 6300129-A 243 09-OCT-2001;
FEATURES             Location/Qualifiers
     source          1. .3819
                     /organism="unknown"
                     /mol_type="genomic DNA"
ORIGIN

  Query Match             95.0%;  Score 368.6;  DB 6;  Length 3819;
  Best Local Similarity   97.7%;  Pred. No. 1.4e-112;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||||  || ||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827


RESULT 9
BD096631
LOCUS       BD096631                3819 bp    DNA     linear   PAT 27-AUG-2002
DEFINITION  Transgenic non-human animals capable of producing heterologous
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            antibodies.
ACCESSION   BD096631
VERSION     BD096631.1  GI:22642219
KEYWORDS    JP 2001527386-A/158.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 3819)
  AUTHORS   Lonberg,N. and Kay,R.M.
  TITLE     Transgenic non-human animals capable of producing heterologous
            antibodies
  JOURNAL   Patent: JP 2001527386-A 158 25-DEC-2001;
            GENPHARM INTERNATIONAL
COMMENT     OS   Unidentified
            PN   JP 2001527386-A/158
            PD   25-DEC-2001
            PF   01-DEC-1997 JP 1998525687
            PR   02-DEC-1996 US    08/758417
            PI   NILS LONBERG,ROBERT M KAY
            PC   C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC
            Strandedness: Single;
            CC   Topology: Linear;
            CC   Transgenic non-human animals capable of
            producing heterologous
            CC            antibodies
            FH   Key             Location/Qualifiers
            FT   source          1. .3819
            FT                   /organism='Unidentified'.
FEATURES             Location/Qualifiers
     source          1. .3819
                     /organism="unidentified"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:32644"
ORIGIN

  Query Match             95.0%;  Score 368.6;  DB 6;  Length 3819;
  Best Local Similarity   97.7%;  Pred. No. 1.4e-112;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||||| || ||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
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Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827


RESULT 10
AY510107
LOCUS       AY510107                 824 bp    mRNA    linear   PRI 03-FEB-2004
DEFINITION  Homo sapiens 9F11 monoclonal IgM antibody light chain mRNA,
            complete cds.
ACCESSION   AY510107
VERSION     AY510107.1  GI:41388185
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 824)
  AUTHORS   Asai,S., Okada,N., Okada,H., Dohi,N. and Hosokawa,M.
  TITLE     Human IgM monoclonal Ab which induces complement mediated cytolysis
            of HIV-1 infected cells
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 824)
  AUTHORS   Asai,S., Okada,N., Okada,H., Dohi,N. and Hosokawa,M.
  TITLE     Direct Submission
  JOURNAL   Submitted (22-DEC-2003) Biodefense, Nagoya City University Graduate
            School of Medical Sciences, 1 Kawasumi Mizuho-cho Mizuho-ku,
            Nagoya, Aichi 467-8601, Japan
FEATURES             Location/Qualifiers
     source          1. .824
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /cell_line="9F11"
     CDS             13. .723
                     /codon_start=1
                     /product="monoclonal IgM antibody light chain"
                     /protein_id="AAS01772.1"
                     /db_xref="GI:41388186"
                     /translation="MDMRVPAQLLGLLLLWFPGSRCDIQMTQSPSSVSASVGDRVTIT
                     CRASQGISSWLAWYQQKPGKAPKLLIYDASSLQSGVPSRFSGSGSGTDFTLTISSLQP
                     EDFATYYCQQANSFPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNN
                     FYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKLYACEV
                     THQGLSSPVTKSFNRGEC"
ORIGIN

  Query Match             94.6%;  Score 367.2;  DB 9;  Length 824;
  Best Local Similarity   96.6%;  Pred. No. 4e-112;
  Matches  375;  Conservative    0;  Mismatches   13;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db          13 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC  72

Qy          61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          73 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 132

Qy         121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
               |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db         133 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 192

Qy         181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
               |||||||||||||||||||||||||||||||| ||||||||||||||||||||||||||
Db         193 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGATGCATCCAGTTTGCAAAGTGGGGTC 252

Qy         241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         253 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 312

Qy         301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
               |||||||||||||||||||||||||||||||||||||||| ||||||||   ||||||
Db         313 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCTCACTTTC 372

Qy         361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 11
BC073764
LOCUS       BC073764                936 bp    mRNA    linear   PRI 30-JUN-2004
DEFINITION  Homo sapiens cDNA clone MGC:88771 IMAGE:4576136, complete cds.
ACCESSION   BC073764
VERSION     BC073764.1  GI:49256424
KEYWORDS    MGC.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 936)
  AUTHORS   Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,
            Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D.,
            Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,
            Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F.,
            Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L.,
            Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L.,
            Scheetz,T.E., Brownstein,M.J., Usdin,T.B., Toshiyuki,S.,
            Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J.,
            Abramson,R.D., Mullahy,S.J., Bosak,S.A., McEwan,P.J.,
            McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S.,
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            Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y.,
            Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D.,
            Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M.,
            Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E.,
```

Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.
TITLE Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
PUBMED 12477932
REFERENCE 2 (bases 1 to 936)
AUTHORS Strausberg,R.
TITLE Direct Submission
JOURNAL Submitted (23-JUN-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
REMARK NIH-MGC Project URL: http://mgc.nci.nih.gov
COMMENT Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis Staudt
cDNA Library Preparation: Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome Center, Stanford University School of Medicine, Stanford, CA 94305
Web site: http://www-shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers, R. M.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAL Plate: 58 Row: c Column: 10
This clone was selected for full length sequencing because it passed the following selection criteria: GenomeScan gene prediction, Similarity but not identity to protein.

FEATURES Location/Qualifiers
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CDS 12. .722
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ORIGIN

Query Match 94.6%; Score 367.2; DB 9; Length 936;
Best Local Similarity 96.6%; Pred. No. 4e-112;
Matches 375; Conservative 0; Mismatches 13; Indels 0; Gaps 0;

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Db        312 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTCACAGTTTCCCATTCACTTTC 371

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db        372 GGCCCTGGGACCAAAGTGGATATCAAAC 399
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RESULT 12
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LOCUS       AX305000                 974 bp    DNA     linear   PAT 11-DEC-2001
DEFINITION  Sequence 29 from Patent EP1158004.
ACCESSION   AX305000
VERSION     AX305000.1  GI:17644678
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Takashi,T., Katsunari,T.P. and Nobuaki,H.
  TITLE     Human monoclonal antibody against a costimulatory signal
            transduction molecule ailim and pharmaceutical use thereof
  JOURNAL   Patent: EP 1158004-A 29 28-NOV-2001;
            Japan Tobacco Inc. (JP)
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ORIGIN

  Query Match           93.8%;  Score 364;  DB 6;  Length 974;
  Best Local Similarity  96.1%;  Pred. No. 4.9e-111;
  Matches  373;  Conservative    0;  Mismatches   15;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db         99 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 158

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db        399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426


RESULT 13
AX306529
LOCUS       AX306529                 974 bp    DNA     linear   PAT 11-DEC-2001
DEFINITION  Sequence 29 from Patent WO0187981.
ACCESSION   AX306529
VERSION     AX306529.1  GI:17645749
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Tsuji,T., Tezuka,K. and Hori,N.
  TITLE     Human monoclonal antibody against a costimulatory signal
            transduction molecule ailim and pharmaceutical use thereof
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  JOURNAL   Patent: WO 0187981-A 29 22-NOV-2001;
            Japan Tobacco Inc. (JP)
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     3'UTR           750. .974
ORIGIN

  Query Match          93.8%;  Score 364;  DB 6;  Length 974;
  Best Local Similarity  96.1%;  Pred. No. 4.9e-111;
  Matches  373;  Conservative    0;  Mismatches   15;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db         39 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 98

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Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Db        399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426


RESULT 14
BD131246
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LOCUS       BD131246                 974 bp    DNA     linear   PAT 18-SEP-2002
DEFINITION  Human monoclonal antibody against constimulation transducer
            molecule AILIM and medicinal utilization thereof.
ACCESSION   BD131246
VERSION     BD131246.1  GI:23226191
KEYWORDS    JP 2002034581-A/28.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 974)
  AUTHORS   Tsuji,T., Tezuka,K. and Hori,N.
  TITLE     Human monoclonal antibody against constimulation transducer
            molecule AILIM and medicinal utilization thereof
  JOURNAL   Patent: JP 2002034581-A 28 05-FEB-2002;
            JAPAN TOBACCO INC
COMMENT     OS   Homo sapiens (human)
            PN   JP 2002034581-A/28
            PD   05-FEB-2002
            PF   30-MAR-2001 JP 2001099508
            PI   TAKASHI TSUJI,KATSUNARI TEZUKA,NOBUAKI HORI
            PC   C12N15/09,A61K31/7088,A61K38/00,A61K39/395,A61K39/395,A61K45/
            PC   00,A61P37/08,
            PC   A61P43/00,A61P43/00,C07K16/28,C07K16/46,C07K19/00,C12N5/10, PC
              C12N15/02,
            PC
            C12P21/08,G01N33/15,G01N33/50,G01N33/53,G01N33/566,G01N33/577// PC
             (C12P21/08,C12R1:91),C12N15/00,A61K37/02,C12N5/00,C12N15/00 CC
            Human monoclonal antibody against constimulation transducer  CC
                  molecule AILIM
            CC   and medicinal utilization thereof
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            FT   5'UTR           (1). .(38)
            FT   CDS             (39). .(749)
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            FT   sig_peptide     (39). .(104).
FEATURES             Location/Qualifiers
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  Query Match             93.8%;  Score 364;  DB 6;  Length 974;
  Best Local Similarity   96.1%;  Pred. No. 4.9e-111;
  Matches  373;  Conservative    0;  Mismatches   15;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db        279 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 338

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db        339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTC 398

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| |||| |||||||
Db        399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426


RESULT 15
BD182353
LOCUS       BD182353                 728 bp    DNA     linear   PAT 15-MAY-2003
DEFINITION  Anti CD40 monoclonal antibody.
ACCESSION   BD182353
VERSION     BD182353.1  GI:30793271
KEYWORDS    WO 02088186-A/46.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 728)
  AUTHORS   Mikayama,T., Yoshida,H., Force,W.R., Chen,X. and Takahashi,N.
  TITLE     Anti CD40 monoclonal antibody
  JOURNAL   Patent: WO 02088186-A 46 07-NOV-2002;
            KIRIN BREWERY CO LTD,TOSHIFUMI MIKAYAMA,HITOSHI YOSHIDA, WALKER R
            FORCE, XINGJIE CHEN,NOBUAKI TAKAHASHI
COMMENT     OS   Homo sapiens (human)
            PN   WO 02088186-A/46
            PD   07-NOV-2002
            PF   26-APR-2002 WO 2002JP004292
            PR   27-APR-2001 WO PCTUS0113672,11-MAY-2001 JP 01P   142482 PR
            05-OCT-2001 JP 01P   310535,26-OCT-2001 US    10/040244 PI
            TOSHIFUMI MIKAYAMA,HITOSHI YOSHIDA,WALKER
            R FORCE,XINGJIE CHEN,
            PI   NOBUAKI TAKAHASHI
            PC   C07K16/28,C12N15/13,C12N5/10,C12P21/08,A61K39/395,A61P35/00,
            PC   A61P37/04,
            PC   A61P37/06,A61P37/08,A61P7/00
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            FT                   /organism='Homo sapiens (human)'.
FEATURES             Location/Qualifiers
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ORIGIN

Query Match 93.4%; Score 362.4; DB 6; Length 728;
Best Local Similarity 95.9%; Pred. No. 1.7e-110;
Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

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Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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4: geneseqn2001as:*
5: geneseqn2001bs:*
6: geneseqn2002as:*
7: geneseqn2002bs:*
8: geneseqn2003as:*
9: geneseqn2003bs:*
10: geneseqn2003cs:*
11: geneseqn2003ds:*
12: geneseqn2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	388	100.0	388	2	AAT73441	Aat73441 Human imm
2	388	100.0	388	2	AAV39239	Aav39239 Functiona
3	388	100.0	388	2	AAZ21993	Aaz21993 Partial n
4	368.6	95.0	420	2	AAT73445	Aat73445 Human imm
5	368.6	95.0	420	2	AAV39293	Aav39293 Synthetic
6	368.6	95.0	420	2	AAZ22047	Aaz22047 Nucleotid
7	368.6	95.0	3819	2	AAT78825	Aat78825 Kappa lig
8	368.6	95.0	3819	2	AAV39266	Aav39266 Plasmid p
9	368.6	95.0	3819	2	AAZ22020	Aaz22020 Nucleotid
10	366.2	94.4	401	12	ADH56388	Adh56388 Variable
11	364	93.8	974	6	AAS99473	Aas99473 Anti-huma
12	362.4	93.4	728	8	ABT31882	Abt31882 Anti-CD40
13	354.2	91.3	711	11	ADM47072	Adm47072 Mouse ant
14	351.2	90.5	409	2	AAV39241	Aav39241 Functiona
15	351.2	90.5	439	2	AAT73443	Aat73443 Human imm
16	349.6	90.1	439	2	AAZ21995	Aaz21995 Partial n
17	348.4	89.8	705	10	ADE28412	Ade28412 Human ant
18	348.4	89.8	705	10	ADE28428	Ade28428 Human ant
19	338.4	87.2	390	3	AAZ39340	Aaz39340 Nucleotid
20	335.6	86.5	384	2	AAT46133	Aat46133 Monoclona
21	335.6	86.5	384	2	AAT85844	Aat85844 Monoclona
22	335.6	86.5	384	10	AAL56203	Aal56203 Human C40
23	335.6	86.5	384	12	ADQ20176	Adq20176 Human sof
24	335.2	86.4	390	2	AAQ87237	Aaq87237 Anti-inte
25	333.6	86.0	426	8	ADA43064	Ada43064 Human ant

26	333.6	86.0	711	12	ADM32966	Adm32966 Nucleotid
27	332	85.6	1106	6	ABQ54241	Abq54241 Human ova
28	331.6	85.5	387	3	AAZ39325	Aaz39325 Nucleotid
29	331	85.3	404	12	ADI13463	Adi13463 Human var
30	330.4	85.2	438	4	AAH41157	Aah41157 Human cod
31	330.2	85.1	463	8	AAD56221	Aad56221 Human AB-
32	330.2	85.1	6082	8	AAD56212	Aad56212 Human AB-
33	327.2	84.3	981	12	ADP07904	Adp07904 Human imm
34	325.6	83.9	714	3	AAA46899	Aaa46899 DNA encod
35	325.6	83.9	714	10	AAD54350	Aad54350 Human 11.
36	325.6	83.9	729	3	AAA11630	Aaa11630 Human imm
37	325.6	83.9	729	6	ABL46009	Abl46009 Humanised
38	324	83.5	1066	2	AAQ49943	Aaq49943 Human ant
39	323.8	83.5	463	8	AAD56219	Aad56219 Human AB-
40	323.8	83.5	6082	8	AAD56211	Aad56211 Human AB-
41	322.4	83.1	817	3	AAA27389	Aaa27389 Human IGF
42	321.4	82.8	772	6	ABQ56247	Abq56247 Human ova
43	320.8	82.7	378	10	ADE07520	Ade07520 Novel cod
44	320.8	82.7	396	2	AAT75423	Aat75423 Human ant
45	320.8	82.7	698	8	ABT31880	Abt31880 Anti-CD40

ALIGNMENTS

RESULT 1
AAT73441
ID AAT73441 standard; DNA; 388 BP.
XX
AC AAT73441;
XX
DT 03-DEC-1997 (first entry)
XX
DE Human immunoglobulin light chain variable region partial transcript.
XX
KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW transplant rejection; ss.
XX
OS Homo sapiens.
XX
PN WO9713852-A1.
XX
PD 17-APR-1997.
XX
PF 10-OCT-1996; 96WO-US016433.
XX
PR 10-OCT-1995; 95US-00544404.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1997-235888/21.
XX
PT Novel anti-CD4 antibody produced by transgenic mice - used in the
PT treatment of auto-immune disease etc.

XX
PS Claim 44; Page 255; 396pp; English.
XX
CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, 10C5 kappa, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes
XX
SQ Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 100.0%; Score 388; DB 2; Length 388;
Best Local Similarity 100.0%; Pred. No. 1e-110;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
```

RESULT 2
AAV39239
ID AAV39239 standard; DNA; 388 BP.
XX

AC AAV39239;
XX
DT 18-DEC-1998 (first entry)
XX
DE Functional Kappa transcript isolated from transgenic cell line 10C5.
XX
KW Transgenic animal; human heterologous antibody; transgene;
KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW autoimmune reaction; inflammatory response; transplant rejection;
KW acid induced lung injury; acute adult respiratory distress syndrome;
KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW cystic fibrosis; ss.
XX
OS Synthetic.
OS Homo sapiens.
OS Mus sp.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 41; Page 304; 452pp; English.
XX
CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
CC antibody. The sequences are isolated from 5 different transgenic mouse
CC hybridoma cell lines. The specification describes transgenic non-human
CC animals, especially a mouse, which are capable of producing a human
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. The transgenic animals have human heavy and light chain
CC transgenes. The transgenes are capable of functionally rearranging a
CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
CC recombination. The transgenes include a heavy chain transgene comprising
CC at least one V, D and J gene segment, and one constant region gene
CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
CC one V and J gene segment and one constant region gene segment. The gene
CC segments are heterologous to the transgenic animal. The antibody can be
CC used to prevent efflux of neutrophils from vasculature. It can also be
CC used to treat reperfusion injury. CD4 binding antibodies are used to
CC reduce undesirable autoimmune reactions, inflammatory responses and
CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC tissue damage and prolong survival in animal models of acute adult
CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis

XX
SQ Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 100.0%; Score 388; DB 2; Length 388;
Best Local Similarity 100.0%; Pred. No. 1e-110;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
```

RESULT 3
AAZ21993
ID AAZ21993 standard; DNA; 388 BP.
XX
AC AAZ21993;
XX
DT 24-NOV-1999 (first entry)
XX
DE Partial nucleotide sequence for a functional transcript 10C5-kappa.
XX
KW Transgenic animal; heterologous antibody; hybridoma; B cell;
KW transgenic mouse; human heavy chain transgene; digoxin; PCR primer;
KW human light chain transgene; immortalized cell; immunoglobulin;
KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9945962-A1.
XX

PD 16-SEP-1999.
XX
PF 12-MAR-1999; 99WO-US005535.
XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;
XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 41; Page 305; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated form a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence represents a partial
CC nucleotide sequence for a functional transcript used in the course of the
CC invention
XX
SQ Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 100.0%; Score 388; DB 2; Length 388;
Best Local Similarity 100.0%; Pred. No. 1e-110;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
```

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RESULT 4
AAT73445
ID   AAT73445 standard; DNA; 420 BP.
XX
AC   AAT73445;
XX
DT   03-DEC-1997  (first entry)
XX
DE   Human immunoglobulin light chain variable region partial transcript.
XX
KW   Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW   transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW   transplant rejection; ss.
XX
OS   Homo sapiens.
XX
PN   WO9713852-A1.
XX
PD   17-APR-1997.
XX
PF   10-OCT-1996;   96WO-US016433.
XX
PR   10-OCT-1995;   95US-00544404.
XX
PA   (GENP-) GENPHARM INT INC.
XX
PI   Lonberg N,  Kay RM;
XX
DR   WPI; 1997-235888/21.
XX
PT   Novel anti-CD4 antibody produced by transgenic mice - used in the
PT   treatment of auto-immune disease etc.
XX
PS   Claim 45; Page 272-273; 396pp; English.
XX
CC   A novel composition has been developed which comprises an immunoglobulin
CC   (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC   -1 for binding to a predetermined human antigen. The present sequence
CC   represents a human light chain variable region partial nucleotide
CC   sequence, LC6G5, which encodes an amino acid sequence from a claimed
CC   immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC   may be used in therapeutic and diagnostic applications, especially for
CC   the treatment of human diseases. These antibodies reduce activity of CD4
CC   cells and reduce undesirable autoimmune reactions, inflammatory response
CC   and transplant rejection. Transgenic animals are capable of producing
CC   heterologous antibodies of multiple isotypes by undergoing isotype
```

```
CC   switching. These animals produce a first Ig type that is necessary for
CC   antigen-stimulated B-cell maturation and can switch to encode and produce
CC   one or more subsequent heterologous isotypes
XX
SQ   Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

  Query Match             95.0%;  Score 368.6;  DB 2;  Length 420;
  Best Local Similarity   97.7%;  Pred. No. 1.2e-104;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394


RESULT 5
AAV39293
ID   AAV39293 standard; DNA; 420 BP.
XX
AC   AAV39293;
XX
DT   18-DEC-1998  (first entry)
XX
DE   Synthetic kappa light chain sequence LC6G5.
XX
KW   Transgenic animal; human heterologous antibody; transgene;
KW   isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW   autoimmune reaction; inflammatory response; transplant rejection;
KW   acid induced lung injury; acute adult respiratory distress syndrome;
KW   ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW   cystic fibrosis; ss.
XX
OS   Synthetic.
```

OS Homo sapiens.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 42; Page 324-325; 452pp; English.
XX
CC The present sequence represents a synthetic kappa light sequence (created
CC using oligonucleotides AAV39267-78). This synthetic sequence differs from
CC natural sequences in that strings of repeated oligonucleotides are
CC interrupted (to facilitate oligonucleotide synthesis and PCR
CC amplification), optimal translation initiation sites are incorporated and
CC HindII sites were engineered upstream of the translation initiation
CC sites. The sequence is used to make plasmid pHC6G5, which is used in the
CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,
CC in the transgenic mouse of the invention. The specification describes
CC transgenic non-human animals, especially a mouse, which are capable of
CC producing a human heterologous antibodies of multiple isotypes by
CC undergoing isotype switching. The transgenic animals have human heavy and
CC light chain transgenes. The transgenes are capable of functionally
CC rearranging a heterologous diversity (D) gene in a variable-diversity-
CC junction (V-D-J) recombination. The transgenes include a heavy chain
CC transgene comprising at least one V, D and J gene segment, and one
CC constant region gene segment. The immunoglobulin (Ig) light chain
CC transgene comprises at least one V and J gene segment and one constant
CC region gene segment. The gene segments are heterologous to the transgenic
CC animal. The antibody can be used to prevent efflux of neutrophils from
CC vasculature. It can also be used to treat reperfusion injury. CD4 binding
CC antibodies are used to reduce undesirable autoimmune reactions,
CC inflammatory responses and rejection of transplanted organs. The anti-IL-
CC 8 antibodies can reduce tissue damage and prolong survival in animal
CC models of acute adult respiratory distress syndrome (ARDS) and acid
CC induced lung injury. The anti-IL-8 antibodies can also be used for the
CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
CC and cystic fibrosis
XX
SQ Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 420;
Best Local Similarity 97.7%; Pred. No. 1.2e-104;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65

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                ||||||||||||  ||||||||||  ||  ||||||||||||||||||||||||||||||||
Db          12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy          66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy         126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy         186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
               |||  |||||  ||||||||||||||||||||||||||||||||||||||| ||||||||
Db         192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy         246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
               ||||||||||||  ||||||||||||||||||||||||||||||||||||||||||||||
Db         252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy         306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  ||
Db         312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy         366 GGGGACCAAGCTGGAGATCAAAC 388
               |||  ||||||||||||||||||
Db         372 GGGAACCAAGCTGGAGATCAAAC 394
```

RESULT 6
AAZ22047
ID AAZ22047 standard; DNA; 420 BP.
XX
AC AAZ22047;
XX
DT 24-NOV-1999 (first entry)
XX
DE Nucleotide sequence of LC6G5.
XX
KW Transgenic animal; heterologous antibody; hybridoma; B cell;
KW transgenic mouse; human heavy chain transgene; digoxin;
KW human light chain transgene; immortalized cell; immunoglobulin;
KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS Synthetic.
XX
PN WO9945962-A1.
XX
PD 16-SEP-1999.
XX
PF 12-MAR-1999; 99WO-US005535.
XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;

XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 42; Page 325-326; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated form a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence is used in the course
CC of the invention
XX
SQ Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 420;
Best Local Similarity 97.7%; Pred. No. 1.2e-104;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

```
Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              |||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394
```

RESULT 7
AAT78825
ID AAT78825 standard; DNA; 3819 BP.
XX
AC AAT78825;
XX
DT 23-JAN-1998 (first entry)
XX
DE Kappa light chain plasmid pLC6G5.
XX
KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW transplant rejection; immunoglobulin; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9713852-A1.
XX
PD 17-APR-1997.
XX
PF 10-OCT-1996; 96WO-US016433.
XX
PR 10-OCT-1995; 95US-00544404.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1997-235888/21.
XX
PT Novel anti-CD4 antibody produced by transgenic mice - used in the
PT treatment of auto-immune disease etc.
XX
PS Example 42; Page 266-268; 396pp; English.
XX
CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents the kappa light chain plasmid pLC6G5 which includes the kappa
CC constant region and polyadenylation site. Anti- CD4 antibodies may be
CC used in therapeutic and diagnostic applications, especially for the
CC treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes
XX
SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

  Query Match   95.0%; Score 368.6; DB 2; Length 3819;
  Best Local Similarity 97.7%; Pred. No. 2.9e-104;
  Matches 374; Conservative   0; Mismatches   9; Indels   0; Gaps   0;

```
Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827
```

```
RESULT 8
AAV39266
ID   AAV39266 standard; DNA; 3819 BP.
XX
AC   AAV39266;
XX
DT   18-DEC-1998  (first entry)
XX
DE   Plasmid pLC6G5 nucleotide sequence.
XX
KW   Transgenic animal; human heterologous antibody; transgene;
KW   isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW   autoimmune reaction; inflammatory response; transplant rejection;
KW   acid induced lung injury; acute adult respiratory distress syndrome;
KW   ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW   cystic fibrosis; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9824884-A1.
XX
PD   11-JUN-1998.
XX
PF   01-DEC-1997;   97WO-US021803.
XX
PR   02-DEC-1996;   96US-00758417.
XX
```

PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 42; Page 317-319; 452pp; English.
XX
CC The present sequence represents a plasmid, pLC6G5, which contains a
CC synthetic kappa light chain sequence (created using oligonucleotide
CC AAV39244-65). This synthetic sequence differs from natural sequences in
CC that strings of repeated oligonucleotides are interrupted (to facilitate
CC oligonucleotide synthesis and PCR amplification), optimal translation
CC initiation sites are incorporated and HindII sites were engineered
CC upstream of the translation initiation sites. The plasmid is used in the
CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,
CC in the transgenic mouse of the invention. The specification describes
CC transgenic non-human animals, especially a mouse, which are capable of
CC producing a human heterologous antibodies of multiple isotypes by
CC undergoing isotype switching. The transgenic animals have human heavy and
CC light chain transgenes. The transgenes are capable of functionally
CC rearranging a heterologous diversity (D) gene in a variable-diversity-
CC junction (V-D-J) recombination. The transgenes include a heavy chain
CC transgene comprising at least one V, D and J gene segment, and one
CC constant region gene segment. The immunoglobulin (Ig) light chain
CC transgene comprises at least one V and J gene segment and one constant
CC region gene segment. The gene segments are heterologous to the transgenic
CC animal. The antibody can be used to prevent efflux of neutrophils from
CC vasculature. It can also be used to treat reperfusion injury. CD4 binding
CC antibodies are used to reduce undesirable autoimmune reactions,
CC inflammatory responses and rejection of transplanted organs. The anti-IL-
CC 8 antibodies can reduce tissue damage and prolong survival in animal
CC models of acute adult respiratory distress syndrome (ARDS) and acid
CC induced lung injury. The anti-IL-8 antibodies can also be used for the
CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
CC and cystic fibrosis
XX
SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 3819;
Best Local Similarity 97.7%; Pred. No. 2.9e-104;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

```
Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624
```

```
Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827
```

```
RESULT 9
AAZ22020
ID   AAZ22020 standard; DNA; 3819 BP.
XX
AC   AAZ22020;
XX
DT   24-NOV-1999  (first entry)
XX
DE   Nucleotide sequence of plasmid pLC6G5.
XX
KW   Transgenic animal; heterologous antibody; hybridoma; B cell;
KW   transgenic mouse; human heavy chain transgene; digoxin;
KW   human light chain transgene; immortalized cell; immunoglobulin;
KW   Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW   transplant rejection; blood disorder; coagulation disorder; ss.
XX
OS   Synthetic.
XX
PN   WO9945962-A1.
XX
PD   16-SEP-1999.
XX
PF   12-MAR-1999;   99WO-US005535.
XX
PR   13-MAR-1998;   98US-00042353.
XX
PA   (GENP-) GENPHARM INT INC.
XX
PI   Lonberg N,  Fishwild DM,  Ball WJ;
XX
DR   WPI; 1999-551219/46.
XX
PT   Novel transgenic non-human animals used to produce heterologous
PT   antibodies.
XX
PS   Example 42; Page 318-320; 484pp; English.
XX
CC   The specification describes transgenic animals that are capable of
CC   producing a heterologous antibody. The antibodies are isolated form a
```

```
CC   hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC   having a genome comprising a human heavy chain transgene and a human
CC   light chain transgene. The B cells are fused to immortalized cells
CC   suitable for generating a hybridoma, which produces a detectable amount
CC   of an immunoglobulin that specifically binds digoxin or Shinga-like
CC   toxin. B cells from transgenic animals can be used to generate hybridomas
CC   expressing monoclonal high affinity human sequence antibodies. Antibodies
CC   produced from the transgenic animals of the invention can be used to
CC   treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC   disease, transplant rejection, blood disorders such as coagulation
CC   disorders and other diseases. The present sequence is used in the course
CC   of the invention
XX
SQ   Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

  Query Match             95.0%;  Score 368.6;  DB 2;  Length 3819;
  Best Local Similarity   97.7%;  Pred. No. 2.9e-104;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||||| || ||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827


RESULT 10
ADH56388
ID   ADH56388 standard; DNA; 401 BP.
XX
AC   ADH56388;
XX
DT   25-MAR-2004  (first entry)
XX
DE   Variable region of the human 9F11 antibody k-chain DNA SEQ ID NO:2.
```

XX
KW human; immunoglobulin M; IgM; monoclonal antibody; HIV infection;
KW anti-HIV; HIV; human 9F11 antibody; gene; ds.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO2004003196-A1.
XX
PD 08-JAN-2004.
XX
PF 30-JUN-2003; 2003WO-JP008306.
XX
PR 01-JUL-2002; 2002JP-00227952.
PR 18-MAR-2003; 2003JP-00074312.
XX
PA (OKAD/) OKADA H.
PA (OKAD/) OKADA N.
XX
PI Okada H, Okada N;
XX
DR WPI; 2004-083055/08.
XX
PT Human IgM monoclonal antibody against activated human lymphocytes or HIV
PT infected cells for treatment of HIV.
XX
PS Claim 4; SEQ ID NO 2; 27pp; Japanese.
XX
CC The present invention describes a human immunoglobulin M (IgM) monoclonal
CC antibody (I) against activated human lymphocytes or HIV infected cells,
CC mediated by homologous complement. Also described: (1) an
CC immunocontrolling agent and HIV treatment containing the antibody; and
CC (2) cells FERM PB-8379 that produce the antibody. (I) has anti-HIV
CC activity, and can be used in the treatment of HIV. The present sequence
CC represents the variable region of the human 9F11 antibody k-chain
CC nucleotide sequence, which is used in the exemplification of the present
CC invention.
XX
SQ Sequence 401 BP; 92 A; 110 C; 105 G; 94 T; 0 U; 0 Other;

Query Match 94.4%; Score 366.2; DB 12; Length 401;
Best Local Similarity 96.6%; Pred. No. 6.7e-104;
Matches 374; Conservative 0; Mismatches 13; Indels 0; Gaps 0;

```
Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||
Db         15 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 74

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         75 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 134

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        135 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 194

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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                ||||||||||||||||||||||||||||||||| |||||||||||||||||||||||
Db        195 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGATGCATCCAGTTTGCAAAGTGGGGTC 254

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        255 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 314

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
                |||||||||||||||||||||||||||||||||||||||| ||||||||   ||||||
Db        315 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCTCACTTTC 374

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAA 387
                |||   ||||||||| ||||||||||
Db        375 GGCGGAGGGACCAAGGTGGAGATCAAA 401
```

RESULT 11
AAS99473
ID AAS99473 standard; cDNA; 974 BP.
XX
AC AAS99473;
XX
DT 12-MAR-2002 (first entry)
XX
DE Anti-human AILIM monoclonal antibody clone Jmab-136, light chain cDNA.
XX
KW Human; antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
KW antiallergic; antiulcer; neuroprotective; antithyroid; vasotropic;
KW immunosuppressive; dermatological; antiinflammatory; hepatotropic;
KW activation inducible lymphocyte immunomodulatory molecule; AILIM;
KW monoclonal antibody; allergy; rheumatoid arthritis; diabetes mellitus;
KW multiple sclerosis; autoimmune thyroiditis; psoriasis; hepatitis;
KW allergic contact-type dermatitis; chronic inflammatory dermatosis;
KW systemic lupus erythematosus; autoimmune disorder; inflammation; ss;
KW graft versus host reaction; immune rejection; intestinal immunity;
KW ulcerative colitis; pneumonia; nephritis; vasculitis; pancreatitis.
XX
OS Homo sapiens.
XX
PN WO200187981-A2.
XX
PD 22-NOV-2001.
XX
PF 15-MAY-2001; 2001WO-JP004035.
XX
PR 18-MAY-2000; 2000JP-00147116.
PR 30-MAR-2001; 2001JP-00099508.
XX
PA (NISB) JAPAN TOBACCO INC.
XX
PI Tsuji T, Tezuka K, Hori N;
XX
DR WPI; 2002-075313/10.
DR P-PSDB; AAU74297.
XX
PT New human monoclonal antibody that binds to activation inducible
PT lymphocyte immunomodulatory molecule, useful for treating rheumatoid

PT arthritis, multiple sclerosis and inflammation.
XX
PS Claim 45; Page 267-270; 300pp; English.
XX
CC The invention relates to a novel human antibody (I), preferably a human
CC monoclonal antibody which binds to an activation inducible lymphocyte
CC immunomodulatory molecule (AILIM). (I) is useful for modulating signal
CC transduction into a cell mediated by AILIM, for modulating proliferation
CC of AILIM-expressing cells, for modulating production of a cytokine from
CC AILIM-expressing cells, and for inducing antibody-dependent cytotoxicity
CC against AILIM-expressing cells and/or immune cytolysis or apoptosis of
CC AILIM-expressing cells. (I) is useful for treating, preventing or
CC prophylaxis of delayed type allergy. (I) is useful for treating and
CC preventing various diseases associated with AILIM-mediated costimulatory
CC transduction, and for inhibiting the onset and/or advancement of the
CC diseases. (I) is useful for suppression, prevention and/or treatment of
CC rheumatoid arthritis, multiple sclerosis, autoimmune thyroiditis,
CC allergic contact-type dermatitis, chronic inflammatory dermatosis,
CC systemic lupus erythematosus, insulin-dependent diabetes mellitus,
CC psoriasis, autoimmune or allergic disorders, inflammation, graft versus
CC host reaction, graft versus host disease, immune rejection, disorders
CC caused by abnormal intestinal immunity, specifically inflammatory
CC intestinal disorders such as ulcerative colitis, pneumonia, hepatitis,
CC nephritis, vasculitis, and pancreatitis. (I) induces no serious
CC immunorejection due to antigenicity to human, i.e., human anti-mouse
CC antigenicity (HAMA) in a host. AAS99444-AAS99477 represent anti-human
CC AILIM monoclonal antibody coding sequences and PCR primers of the
CC invention
XX
SQ Sequence 974 BP; 246 A; 282 C; 232 G; 214 T; 0 U; 0 Other;

Query Match 93.8%; Score 364; DB 6; Length 974;
Best Local Similarity 96.1%; Pred. No. 4.7e-103;
Matches 373; Conservative 0; Mismatches 15; Indels 0; Gaps 0;

```
Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db         39 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 98

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         99 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 158

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||| | ||||||||||||||||||
Db        159 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAG 218

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||| |||||||||||| ||||||||||||||||||||||||||
Db        219 AAACCAGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 278

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        279 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 338

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||||| ||||||||||  || ||
```

```
Db        339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTC 398

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| |||| |||||||
Db        399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426
```

RESULT 12
ABT31882
ID ABT31882 standard; DNA; 728 BP.
XX
AC ABT31882;
XX
DT 01-MAY-2003 (first entry)
XX
DE Anti-CD40 monoclonal antibody related DNA SEQ ID No 65.
XX
KW Antiallergic; haemostatic; immunomodulator; cytostatic; antibody;
KW human CD40; IL-12; LPS; lipopolysaccharide; IFNgamma; interferon gamma;
KW dendritic cell; high G28-5; CD95 expression; high G28-5; B cell line;
KW immunoactivator; anti-tumour agent; immunosuppressant; allergy;
KW autoimmune disease; coagulation factor VIII inhibitor; anti-CD40; gene;
KW ds.
XX
OS Unidentified.
XX
PN WO200288186-A1.
XX
PD 07-NOV-2002.
XX
PF 26-APR-2002; 2002WO-JP004292.
XX
PR 27-APR-2001; 2001WO-US013672.
PR 11-MAY-2001; 2001JP-00142482.
PR 05-OCT-2001; 2001JP-00310535.
PR 26-OCT-2001; 2001US-00040244.
XX
PA (KIRI) KIRIN BEER KK.
XX
PI Mikayama T, Yoshida H, Force WR, Chen X, Takahashi N;
XX
DR WPI; 2003-120463/11.
DR P-PSDB; ABJ36940.
XX
PT Anti-CD40 monoclonal antibody with antagonist/agonist activity to CD40,
PT or functional fragment, is useful in the treatment of e.g. autoimmune
PT diseases or cancer.
XX
PS Claim 16; Page 59-60; 94pp; Japanese.
XX
CC The invention relates to an antibody to human CD40, or its functional
CC fragment, has at least one of the following properties: acting on
CC dendritic cells to produce IL-12 in the presence of LPS
CC (lipopolysaccharide) and IFNgamma (interferon gamma); acting on dendritic
CC cells to activate maturity of the dendritic cells with high G28-5
CC antibody; and activating CD95 expression with high G28-5 antibody against
CC B cell line. Such antibodies or functional fragments can be used as

```
CC   immunoactivators, anti-tumour agents, immunosuppressants, and as remedies
CC   for autoimmune diseases, allergy or coagulation factor VIII inhibitors
CC   syndrome. This polynucleotide sequence represents a coding DNA sequence
CC   relating to the anti-CD40 monoclonal antibody of the invention
XX
SQ   Sequence 728 BP; 183 A; 201 C; 195 G; 149 T; 0 U; 0 Other;

  Query Match           93.4%;  Score 362.4;  DB 8;  Length 728;
  Best Local Similarity  95.9%;  Pred. No. 1.3e-102;
  Matches  372;  Conservative    0;  Mismatches   16;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||
Db         59 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 118

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              |||||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db        119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        179 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db        239 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||||||||||||| ||||||||||||||||||||||||||||||||||
Db        299 CCATCAAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||||||||  ||||||||    || ||
Db        359 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| ||||||||||||
Db        419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446


RESULT 13
ADM47072
ID   ADM47072 standard; DNA; 711 BP.
XX
AC   ADM47072;
XX
DT   03-JUN-2004  (first entry)
XX
DE   Mouse anti-human G-CSF antibody light chain gene.
XX
KW   methylotroph yeast; mammalian sugar chain; OCH1; alpha-1;
KW   6-mannosyl transferase; alpha-1; 2-mannosidase;
KW   orotidin-5'-phosphate decarboxylase; URA3;
KW   phosphoribosyl-amino-imidazole succinocarboxamide synthase; ADE1;
KW   imidazole-glycerol-phosphate dehydratase; HIS3;
KW   3-isopropyl malate dehydrogenase; LEU2; proteinase A; proteinase B; PRB1;
KW   PEP4; YPS1; KTR1; MNN9; AOX; GAPDH; mannosyl transferase;
```

KW glyceraldehyde 3-phosphate dehydrogenase; mannose glycoprotein; ds; gene.
XX
OS Mus sp.
XX
PN WO2003091431-A1.
XX
PD 06-NOV-2003.
XX
PF 28-APR-2003; 2003WO-JP005464.
XX
PR 26-APR-2002; 2002JP-00127677.
XX
PA (KIRI) KIRIN BEER KK.
PA (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY.
XX
PI Kobayashi K, Kitagawa Y, Komeda T, Kawashima N, Jigami Y;
PI Chiba Y;
XX
DR WPI; 2003-854401/79.
XX
PT Producing methylotroph yeast that expresses mammalian sugar chains by
PT disrupting the OCH1 gene and inserting an alpha-1,2-mannosidase gene.
XX
PS Example 28; SEQ ID NO 91; 247pp; Japanese.
XX
CC The invention relates to the production of a methylotroph yeast that
CC produces mammalian sugar chains, comprising disrupting the OCH1 gene in
CC the yeast that encodes for alpha-1,6-mannosyl transferase and inserting
CC and expressing the alpha-1,2-mannosidase gene. The specification also
CC includes DNA sequences encoding: (a) orotidin-5'-phosphate decarboxylase
CC (URA3); (b) phosphoribosyl-amino-imidazole succinocarboxamide synthase
CC (ADE1); (c) imidazole-glycerol-phosphate dehydratase (HIS3); (d) 3-
CC isopropyl malate dehydrogenase (LEU2); (e) alpha-1,6-mannosyl transferase
CC (OCH1); (f) proteinase A (PEP4); (g) proteinase B (PRB1); and (h)
CC aspartic protease (YPS1), mannosyl transferase (KTR1 or MNN9), alcohol
CC oxidase (AOX) and glyceraldehyde 3-phosphate dehydrogenase (GAPDH) gene
CC sequences. The yeast is used for the production of human and mammalian
CC high mannose glycoproteins with high yield and purity. The method is also
CC useful for producing hybrid or complex sugar chains containing mammalian
CC type chains. This sequence represents the gene encoding a mouse anti-
CC human G-CSF antibody light chain used in the invention.
XX
SQ Sequence 711 BP; 176 A; 203 C; 182 G; 150 T; 0 U; 0 Other;

Query Match 91.3%; Score 354.2; DB 11; Length 711;
Best Local Similarity 95.3%; Pred. No. 4.7e-100;
Matches 365; Conservative 0; Mismatches 18; Indels 0; Gaps 0;

```
Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||| |||||||||||||||||||||||||||||||||||| ||||||| |  ||||
Db          6 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGCTCCCAGGTGCACGATG 65

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         66 TGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
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                ||||||||||||||||||||| |||||||||||||||||||||||||||||||| |||||
Db        126 CATCACTTGTCGGGCGAGTCAGGTTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
                |||||||||||||||||||||||||||||||||| ||||||||    || || |||||
Db        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCCGACGTTCGGCCA 365

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
                 ||||||||| |||| |||||||
Db        366 AGGGACCAAGGTGGAAATCAAAC 388
```

RESULT 14
AAV39241
ID AAV39241 standard; DNA; 409 BP.
XX
AC AAV39241;
XX
DT 18-DEC-1998 (first entry)
XX
DE Functional kappa transcript isolated from transgenic cell line 4D1.
XX
KW Transgenic animal; human heterologous antibody; transgene;
KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW autoimmune reaction; inflammatory response; transplant rejection;
KW acid induced lung injury; acute adult respiratory distress syndrome;
KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW cystic fibrosis; ss.
XX
OS Synthetic.
OS Homo sapiens.
OS Mus sp.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.

XX
PS Example 41; Page 304-305; 452pp; English.
XX
CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
CC antibody. The sequences are isolated from 5 different transgenic mouse
CC hybridoma cell lines. The specification describes transgenic non-human
CC animals, especially a mouse, which are capable of producing a human
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. The transgenic animals have human heavy and light chain
CC transgenes. The transgenes are capable of functionally rearranging a
CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
CC recombination. The transgenes include a heavy chain transgene comprising
CC at least one V, D and J gene segment, and one constant region gene
CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
CC one V and J gene segment and one constant region gene segment. The gene
CC segments are heterologous to the transgenic animal. The antibody can be
CC used to prevent efflux of neutrophils from vasculature. It can also be
CC used to treat reperfusion injury. CD4 binding antibodies are used to
CC reduce undesirable autoimmune reactions, inflammatory responses and
CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC tissue damage and prolong survival in animal models of acute adult
CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
XX
SQ Sequence 409 BP; 95 A; 112 C; 102 G; 100 T; 0 U; 0 Other;

Query Match 90.5%; Score 351.2; DB 2; Length 409;
Best Local Similarity 94.1%; Pred. No. 3.3e-99;
Matches 365; Conservative 0; Mismatches 23; Indels 0; Gaps 0;

```
Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||| | |||||| ||||||||||||||||||||||||||| ||||||||| ||
Db          1 ATGGACATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||| |||||||||||||||||||||||| || ||||||||||||||||||||||||
Db         61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||| |||||||||||||  |||||||||| ||||||||||||||||||||||||||
Db        181 AAACCAGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||| || || ||||||  | ||||||  ||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
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```
Db         361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388


RESULT 15
AAT73443
ID   AAT73443 standard; DNA; 439 BP.
XX
AC   AAT73443;
XX
DT   03-DEC-1997  (first entry)
XX
DE   Human immunoglobulin light chain variable region partial transcript.
XX
KW   Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
KW   transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW   transplant rejection; ss.
XX
OS   Homo sapiens.
XX
PN   WO9713852-A1.
XX
PD   17-APR-1997.
XX
PF   10-OCT-1996;   96WO-US016433.
XX
PR   10-OCT-1995;   95US-00544404.
XX
PA   (GENP-) GENPHARM INT INC.
XX
PI   Lonberg N,  Kay RM;
XX
DR   WPI; 1997-235888/21.
XX
PT   Novel anti-CD4 antibody produced by transgenic mice - used in the
PT   treatment of auto-immune disease etc.
XX
PS   Claim 44; Page 256; 396pp; English.
XX
CC   A novel composition has been developed which comprises an immunoglobulin
CC   (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC   -1 for binding to a predetermined human antigen. The present sequence
CC   represents a human light chain variable region partial nucleotide
CC   sequence, 4D1 kappa, which encodes an amino acid sequence from a claimed
CC   immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC   may be used in therapeutic and diagnostic applications, especially for
CC   the treatment of human diseases. These antibodies reduce activity of CD4
CC   cells and reduce undesirable autoimmune reactions, inflammatory response
CC   and transplant rejection. Transgenic animals are capable of producing
CC   heterologous antibodies of multiple isotypes by undergoing isotype
CC   switching. These animals produce a first Ig type that is necessary for
CC   antigen-stimulated B-cell maturation and can switch to encode and produce
CC   one or more subsequent heterologous isotypes
XX
SQ   Sequence 439 BP; 100 A; 122 C; 106 G; 111 T; 0 U; 0 Other;

  Query Match             90.5%;  Score 351.2;  DB 2;  Length 439;
  Best Local Similarity   94.1%;  Pred. No. 3.4e-99;
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  Matches  365;  Conservative    0;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db          1 ATGGACATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              |||||  |||||||||||||||||||||||||  ||  ||||||||||||||||||||||
Db         61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||  ||||||||||||  |||||||||| ||||||||||||||||||||||||||
Db        181 AAACCAGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||  ||  ||  ||||||  |  ||||||  ||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388


Search completed: December  2, 2004, 13:05:55
Job time : 303.42 secs

                          GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on:         December  2, 2004, 12:19:03 ; Search time 56.6692 Seconds
                                            (without alignments)
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Title:          US-08-728-463B-206
Perfect score:  388
Sequence:       1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

Scoring table:  IDENTITY_NUC
                Gapop 10.0 , Gapext 1.0

Searched:       824507 seqs, 355394441 residues

Total number of hits satisfying chosen parameters:      1649014

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	388	100.0	388	3	US-09-042-353-358	Sequence 358, App
	2	388	100.0	388	3	US-08-758-417A-206	Sequence 206, App
	3	368.6	95.0	420	3	US-09-042-353-420	Sequence 420, App
	4	368.6	95.0	420	3	US-08-758-417A-220	Sequence 220, App
	5	368.6	95.0	3819	3	US-09-042-353-393	Sequence 393, App
	6	368.6	95.0	3819	3	US-08-758-417A-243	Sequence 243, App
	7	351.2	90.5	439	3	US-09-042-353-360	Sequence 360, App
	8	351.2	90.5	439	3	US-08-758-417A-208	Sequence 208, App
	9	335.6	86.5	384	1	US-08-259-372A-13	Sequence 13, Appl
	10	335.6	86.5	384	1	US-08-468-671-13	Sequence 13, Appl
	11	335.2	86.4	390	2	US-08-646-367-2	Sequence 2, Appli
	12	325.6	83.9	714	4	US-09-472-087-62	Sequence 62, Appl
	13	324	83.5	1066	1	US-08-157-101A-4	Sequence 4, Appli
	14	319.2	82.3	19040	4	US-09-343-485A-3	Sequence 3, Appli
	15	318.2	82.0	387	3	US-08-803-085-3	Sequence 3, Appli
	16	313.4	80.8	387	1	US-08-217-918-1	Sequence 1, Appli
	17	298.8	77.0	705	1	US-08-488-376-16	Sequence 16, Appl
	18	298.8	77.0	705	2	US-08-634-223-16	Sequence 16, Appl
	19	298.8	77.0	705	2	US-08-634-224-16	Sequence 16, Appl
	20	298.8	77.0	705	2	US-08-634-400-16	Sequence 16, Appl
	21	298.8	77.0	705	2	US-08-635-878-16	Sequence 16, Appl
	22	298.8	77.0	705	2	US-08-770-057-16	Sequence 16, Appl
	23	298.8	77.0	705	3	US-09-335-697B-16	Sequence 16, Appl
	24	298.8	77.0	705	4	US-09-335-697B-16	Sequence 16, Appl
	25	298.8	77.0	705	4	US-09-740-002-16	Sequence 16, Appl
C	26	292.8	75.5	371	4	US-09-389-681-187	Sequence 187, App
C	27	292.8	75.5	371	4	US-09-620-405B-187	Sequence 187, App
C	28	292.8	75.5	371	4	US-09-339-338-187	Sequence 187, App
C	29	292.8	75.5	371	4	US-09-433-826B-187	Sequence 187, App
C	30	292.8	75.5	371	4	US-09-604-287A-187	Sequence 187, App
C	31	292.8	75.5	371	4	US-09-834-759-187	Sequence 187, App
C	32	292.8	75.5	371	4	US-09-590-751A-187	Sequence 187, App
	33	283.6	73.1	990	4	US-09-800-729-79	Sequence 79, Appl
	34	280.2	72.2	381	2	US-08-621-751A-5	Sequence 5, Appli
	35	279.2	72.0	708	1	US-08-488-376-18	Sequence 18, Appl

36	279.2	72.0	708	2	US-08-634-223-18	Sequence 18, Appl
37	279.2	72.0	708	2	US-08-634-224-18	Sequence 18, Appl
38	279.2	72.0	708	2	US-08-634-400-18	Sequence 18, Appl
39	279.2	72.0	708	2	US-08-635-878-18	Sequence 18, Appl
40	279.2	72.0	708	2	US-08-770-057-18	Sequence 18, Appl
41	279.2	72.0	708	3	US-09-335-697B-18	Sequence 18, Appl
42	279.2	72.0	708	4	US-09-335-697B-18	Sequence 18, Appl
43	279.2	72.0	708	4	US-09-740-002-18	Sequence 18, Appl
44	277	71.4	321	3	US-09-240-274-109	Sequence 109, App
45	275	70.9	847	1	US-08-053-131-184	Sequence 184, App

ALIGNMENTS

```
RESULT 1
US-09-042-353-358
; Sequence 358, Application US/09042353
; Patent No. 6255458
;  GENERAL INFORMATION:
;    APPLICANT:  Lonberg, Nils
;    APPLICANT:  Kay, Robert M.
;    TITLE OF INVENTION:  Transgenic No. 6255458-Human Animals for
;    TITLE OF INVENTION:  Producing Heterologous Antibodies
;    NUMBER OF SEQUENCES:  421
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/042,353
;      FILING DATE:  13-MAR-1998
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/810,279
;      FILING DATE:  17-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/853,408
;      FILING DATE:  18-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/904,068
;      FILING DATE:  23-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/990,860
;      FILING DATE:  16-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/053,131
;      FILING DATE:  26-APR-1993
;    PRIOR APPLICATION DATA:
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;       APPLICATION NUMBER:  US 08/096,762
;       FILING DATE:  22-JUL-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/155,301
;       FILING DATE:  18-NOV-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/161,739
;       FILING DATE:  03-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/165,699
;       FILING DATE:  10-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/209,741
;       FILING DATE:  09-MAR-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/352,322
;       FILING DATE:  07-DEC-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/544,404
;       FILING DATE:  10-OCT-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/728,463
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US96/16433
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/758,417
;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  358:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  388 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-358

  Query Match             100.0%;  Score 388;  DB 3;  Length 388;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-108;
  Matches  388;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy         121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy         181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy         241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy         301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy         361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
                    ||||||||||||||||||||||||||||
Db         361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388


RESULT 2
US-08-758-417A-206
; Sequence 206, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
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;               APPLICATION NUMBER: US 08/209,741
;               FILING DATE: 09-MAR-1994
;               APPLICATION NUMBER: US 08/165,699
;               FILING DATE: 10-DEC-1993
;               APPLICATION NUMBER: US 08/161,739
;               FILING DATE: 03-DEC-1993
;               APPLICATION NUMBER: US 08/155,301
;               FILING DATE: 18-NOV-1993
;               APPLICATION NUMBER: US 08/096,762
;               FILING DATE: 22-JUL-1993
;               APPLICATION NUMBER: US 08/053,131
;               FILING DATE: 26-APR-1993
;               APPLICATION NUMBER: US 07/990,860
;               FILING DATE: 16-DEC-1992
;          ATTORNEY/AGENT INFORMATION:
;               NAME: Serafini, Andrew T.
;               REGISTRATION NUMBER: 41,303
;               REFERENCE/DOCKET NUMBER: 014643-009030US
;          TELECOMMUNICATION INFORMATION:
;               TELEPHONE: (415) 576-0200
;               TELEFAX: (415) 576-0300
;     INFORMATION FOR SEQ ID NO: 206:
;          SEQUENCE CHARACTERISTICS:
;               LENGTH: 388 base pairs
;               TYPE: nucleic acid
;               STRANDEDNESS: single
;               TOPOLOGY: linear
;          MOLECULE TYPE: DNA
;          SEQUENCE DESCRIPTION: SEQ ID NO: 206:
US-08-758-417A-206

  Query Match             100.0%;  Score 388;  DB 3;  Length 388;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-108;
  Matches  388;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388


RESULT 3
US-09-042-353-420
; Sequence 420, Application US/09042353
; Patent No. 6255458
;  GENERAL INFORMATION:
;    APPLICANT:  Lonberg, Nils
;    APPLICANT:  Kay, Robert M.
;    TITLE OF INVENTION:  Transgenic No. 6255458-Human Animals for
;    TITLE OF INVENTION:  Producing Heterologous Antibodies
;    NUMBER OF SEQUENCES:  421
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/042,353
;      FILING DATE:  13-MAR-1998
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/810,279
;      FILING DATE:  17-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/853,408
;      FILING DATE:  18-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/904,068
;      FILING DATE:  23-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/990,860
;      FILING DATE:  16-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/053,131
;      FILING DATE:  26-APR-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/096,762
;      FILING DATE:  22-JUL-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/155,301
;      FILING DATE:  18-NOV-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/161,739
;      FILING DATE:  03-DEC-1993
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;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/165,699
;       FILING DATE:  10-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/209,741
;       FILING DATE:  09-MAR-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/352,322
;       FILING DATE:  07-DEC-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/544,404
;       FILING DATE:  10-OCT-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/728,463
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US96/16433
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/758,417
;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  420:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  420 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-420

  Query Match             95.0%;  Score 368.6;  DB 3;  Length 420;
  Best Local Similarity   97.7%;  Pred. No. 1.1e-102;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||  |||||||||||  ||  ||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
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Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
                ||||||||||||| ||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
                |||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
                ||| ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394


RESULT 4
US-08-758-417A-220
; Sequence 220, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
;             APPLICATION NUMBER: US 08/209,741
;             FILING DATE: 09-MAR-1994
;             APPLICATION NUMBER: US 08/165,699
;             FILING DATE: 10-DEC-1993
;             APPLICATION NUMBER: US 08/161,739
;             FILING DATE: 03-DEC-1993
;             APPLICATION NUMBER: US 08/155,301
;             FILING DATE: 18-NOV-1993
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; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 220:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 220:
US-08-758-417A-220

Query Match 95.0%; Score 368.6; DB 3; Length 420;
Best Local Similarity 97.7%; Pred. No. 1.1e-102;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

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Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||||  || ||||||||||||||||||||||||||||||
Db         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||||| ||||||||
Db        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db        372 GGGAACCAAGCTGGAGATCAAAC 394
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RESULT 5

US-09-042-353-393
; Sequence 393, Application US/09042353
; Patent No. 6255458
; GENERAL INFORMATION:
; APPLICANT: Lonberg, Nils
; APPLICANT: Kay, Robert M.
; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
; TITLE OF INVENTION: Producing Heterologous Antibodies
; NUMBER OF SEQUENCES: 421
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322

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;       FILING DATE:  07-DEC-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/544,404
;       FILING DATE:  10-OCT-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/728,463
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US96/16433
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/758,417
;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  393:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  3819 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-393

  Query Match             95.0%;  Score 368.6;  DB 3;  Length 3819;
  Best Local Similarity   97.7%;  Pred. No. 2.5e-102;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
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```
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| |||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827


RESULT 6
US-08-758-417A-243
; Sequence 243, Application US/08758417A
; Patent No. 6300129
;  GENERAL INFORMATION:
;       APPLICANT: Lonberg, Nils
;                  Kay, Robert M.
;       TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                           Producing Heterologous Antibodies
;       NUMBER OF SEQUENCES: 417
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Townsend and Townsend and Crew LLP
;            STREET: Two Embarcadero Center, Eighth Floor
;            CITY: San Francisco
;            STATE: California
;            COUNTRY: USA
;            ZIP: 94111-3834
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/08/758,417A
;            FILING DATE: 02-Dec-1996
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: US 08/728,463
;            FILING DATE: 10-OCT-1996
;            APPLICATION NUMBER: US 08/544,404
;            FILING DATE: 10-OCT-1995
;            APPLICATION NUMBER: US 08/352,322
;            FILING DATE: 07-DEC-1994
;            APPLICATION NUMBER: US 08/209,741
;            FILING DATE: 09-MAR-1994
;            APPLICATION NUMBER: US 08/165,699
;            FILING DATE: 10-DEC-1993
;            APPLICATION NUMBER: US 08/161,739
;            FILING DATE: 03-DEC-1993
;            APPLICATION NUMBER: US 08/155,301
;            FILING DATE: 18-NOV-1993
;            APPLICATION NUMBER: US 08/096,762
;            FILING DATE: 22-JUL-1993
;            APPLICATION NUMBER: US 08/053,131
;            FILING DATE: 26-APR-1993
;            APPLICATION NUMBER: US 07/990,860
;            FILING DATE: 16-DEC-1992
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Serafini, Andrew T.
```

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;              REGISTRATION NUMBER: 41,303
;              REFERENCE/DOCKET NUMBER: 014643-009030US
;         TELECOMMUNICATION INFORMATION:
;              TELEPHONE: (415) 576-0200
;              TELEFAX: (415) 576-0300
;    INFORMATION FOR SEQ ID NO: 243:
;         SEQUENCE CHARACTERISTICS:
;              LENGTH: 3819 base pairs
;              TYPE: nucleic acid
;              STRANDEDNESS: single
;              TOPOLOGY: linear
;         MOLECULE TYPE: DNA
;         SEQUENCE DESCRIPTION: SEQ ID NO: 243:
US-08-758-417A-243

  Query Match             95.0%;  Score 368.6;  DB 3;  Length 3819;
  Best Local Similarity   97.7%;  Pred. No. 2.5e-102;
  Matches  374;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
              ||||||||||||| |||||||||| || ||||||||||||||||||||||||||||||||
Db       2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy         66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qy        126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy        186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
              ||| ||||| |||||||||||||||||||||||||||||||||||||| ||||||||
Db       2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
              |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       2685 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Qy        306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db       2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804

Qy        366 GGGGACCAAGCTGGAGATCAAAC 388
              ||| ||||||||||||||||||
Db       2805 GGGAACCAAGCTGGAGATCAAAC 2827


RESULT 7
US-09-042-353-360
; Sequence 360, Application US/09042353
; Patent No. 6255458
;  GENERAL INFORMATION:
;    APPLICANT:  Lonberg, Nils
;    APPLICANT:  Kay, Robert M.
;    TITLE OF INVENTION:  Transgenic No. 6255458-Human Animals for
;    TITLE OF INVENTION:  Producing Heterologous Antibodies
```

```
;     NUMBER OF SEQUENCES:  421
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Townsend and Townsend and Crew LLP
;       STREET:  Two Embarcadero Center, Eighth Floor
;       CITY:  San Francisco
;       STATE:  California
;       COUNTRY:  USA
;       ZIP:  94111-3834
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/042,353
;       FILING DATE:  13-MAR-1998
;       CLASSIFICATION:  800
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/810,279
;       FILING DATE:  17-DEC-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/853,408
;       FILING DATE:  18-MAR-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/904,068
;       FILING DATE:  23-JUN-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/990,860
;       FILING DATE:  16-DEC-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/053,131
;       FILING DATE:  26-APR-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/096,762
;       FILING DATE:  22-JUL-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/155,301
;       FILING DATE:  18-NOV-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/161,739
;       FILING DATE:  03-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/165,699
;       FILING DATE:  10-DEC-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/209,741
;       FILING DATE:  09-MAR-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/352,322
;       FILING DATE:  07-DEC-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/544,404
;       FILING DATE:  10-OCT-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/728,463
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
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;       APPLICATION NUMBER:  WO PCT/US96/16433
;       FILING DATE:  10-OCT-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/758,417
;       FILING DATE:  02-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  WO PCT/US97/21803
;       FILING DATE:  01-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Apple, Randolph T.
;       REGISTRATION NUMBER:  36,429
;       REFERENCE/DOCKET NUMBER:  014643-009040US
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 576-0200
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  360:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  439 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA
US-09-042-353-360

  Query Match             90.5%;  Score 351.2;  DB 3;  Length 439;
  Best Local Similarity   94.1%;  Pred. No. 2.3e-97;
  Matches  365;  Conservative    0;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||  | ||||||||||||||||||||||||||||| |||||||||  ||
Db          1 ATGGACATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||| |||||||||||||||||||||||||| ||  ||||||||||||||||||||||||
Db         61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||| ||||||||||||  |||||||||| ||||||||||||||||||||||||||
Db        181 AAACCAGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||| || || ||||||  | ||||||  ||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              |||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 8
US-08-758-417A-208
; Sequence 208, Application US/08758417A
; Patent No. 6300129
;   GENERAL INFORMATION:
;        APPLICANT: Lonberg, Nils
;                   Kay, Robert M.
;        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
;                            Producing Heterologous Antibodies
;        NUMBER OF SEQUENCES: 417
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Townsend and Townsend and Crew LLP
;             STREET: Two Embarcadero Center, Eighth Floor
;             CITY: San Francisco
;             STATE: California
;             COUNTRY: USA
;             ZIP: 94111-3834
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/758,417A
;             FILING DATE: 02-Dec-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/728,463
;             FILING DATE: 10-OCT-1996
;             APPLICATION NUMBER: US 08/544,404
;             FILING DATE: 10-OCT-1995
;             APPLICATION NUMBER: US 08/352,322
;             FILING DATE: 07-DEC-1994
;             APPLICATION NUMBER: US 08/209,741
;             FILING DATE: 09-MAR-1994
;             APPLICATION NUMBER: US 08/165,699
;             FILING DATE: 10-DEC-1993
;             APPLICATION NUMBER: US 08/161,739
;             FILING DATE: 03-DEC-1993
;             APPLICATION NUMBER: US 08/155,301
;             FILING DATE: 18-NOV-1993
;             APPLICATION NUMBER: US 08/096,762
;             FILING DATE: 22-JUL-1993
;             APPLICATION NUMBER: US 08/053,131
;             FILING DATE: 26-APR-1993
;             APPLICATION NUMBER: US 07/990,860
;             FILING DATE: 16-DEC-1992
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Serafini, Andrew T.
;             REGISTRATION NUMBER: 41,303
;             REFERENCE/DOCKET NUMBER: 014643-009030US
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (415) 576-0200
;             TELEFAX: (415) 576-0300
;   INFORMATION FOR SEQ ID NO: 208:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 439 base pairs
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;               TYPE: nucleic acid
;               STRANDEDNESS: single
;               TOPOLOGY: linear
;          MOLECULE TYPE: DNA
;          SEQUENCE DESCRIPTION: SEQ ID NO: 208:
US-08-758-417A-208

  Query Match .          90.5%;  Score 351.2;  DB 3;  Length 439;
  Best Local Similarity   94.1%;  Pred. No. 2.3e-97;
  Matches  365;  Conservative    0;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||  | ||||||||||||||||||||||||||||||| ||||||||| ||
Db          1 ATGGACATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||| |||||||||||||||||||||||| ||  ||||||||||||||||||||||
Db         61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||| ||||||||||||  |||||||||| |||||||||||||||||||||||||||
Db        181 AAACCAGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||| || || ||||||  | ||||||||||||||||||||
Db        301 CAGCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTT 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              |||||||||||||||||||||||||||
Db        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388


RESULT 9
US-08-259-372A-13
; Sequence 13, Application US/08259372A
; Patent No. 5565354
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
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;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/259,372A
;       FILING DATE:  14-JUN-1994
;       CLASSIFICATION:  424
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/871,426
;       FILING DATE:  21-APR-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/676,036
;       FILING DATE:  27-MAR-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/538,796
;       FILING DATE:  15-JUN-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/192,754
;       FILING DATE:  11-MAY-1988
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 06/925,196
;       FILING DATE:  31-OCT-1986
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 06/904,517
;       FILING DATE:  05-SEP-1986
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Smith, William M.
;       REGISTRATION NUMBER:  30,223
;       REFERENCE/DOCKET NUMBER:  11823-50-7
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 326-2400
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  13:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  384 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  unknown
;       TOPOLOGY:  unknown
;     MOLECULE TYPE:  cDNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     ORIGINAL SOURCE:
;       ORGANISM:  Homo sapiens
;       CELL TYPE:  Hybridoma
;       CELL LINE:  ZM1-2
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..384
US-08-259-372A-13

  Query Match             86.5%;  Score 335.6;  DB 1;  Length 384;
  Best Local Similarity   92.4%;  Pred. No. 1.2e-92;
  Matches  353;  Conservative    0;  Mismatches   29;  Indels    0;  Gaps    0;

Qy          7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
              |||| |  |  ||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db          1 ATGAGGCCCGTCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy         67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
              ||||||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db         61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTGGGAGACAGAGTCACC 120

Qy        127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
              |||||||||||||||||||| ||||||||| |||||||||||||||||||| ||||||
Db        121 GTCACTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy        187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
              |||||||||||||| ||||||||| ||||||||||||||||||||||||||||||||||
Db        181 GGGAAAGCCCCTAAACTCCTGATCCATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 240

Qy        247 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
              ||||||| |||||||||||||||||||||||||||||||||||| |||||||||| ||
Db        241 AGGTTCATCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCACCAGCCTGCAGGCT 300

Qy        307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
              |||||||||||||| |||||||||||||||||| | ||| |||| |  ||||| |||
Db        301 GAAGATTTTGCAACCTACTATTGTCAACAGGCTGACAGTCTCCCTTTTACTTTCGGCGGA 360

Qy        367 GGGACCAAGCTGGAGATCAAAC 388
              ||||||||| ||||  ||||||
Db        361 GGGACCAAGGTGGACTTCAAAC 382
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RESULT 10
US-08-468-671-13
; Sequence 13, Application US/08468671
; Patent No. 5648077
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/468,671
;      FILING DATE:  06-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/259,372
;      FILING DATE:  14-JUN-1994
;      APPLICATION NUMBER:  US 07/871,426
;      FILING DATE:  21-APR-1992
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;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/676,036
;       FILING DATE:  27-MAR-1991
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/538,796
;       FILING DATE:  15-JUN-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/192,754
;       FILING DATE:  11-MAY-1988
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 06/925,196
;       FILING DATE:  31-OCT-1986
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 06/904,517
;       FILING DATE:  05-SEP-1986
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Smith, William M.
;       REGISTRATION NUMBER:  30,223
;       REFERENCE/DOCKET NUMBER:  11823-50-7
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 326-2400
;       TELEFAX:  (415) 576-0300
;   INFORMATION FOR SEQ ID NO:  13:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  384 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  unknown
;       TOPOLOGY:  unknown
;     MOLECULE TYPE:  cDNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     ORIGINAL SOURCE:
;       ORGANISM:  Homo sapiens
;       CELL TYPE:  Hybridoma
;       CELL LINE:  ZM1-2
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..384
US-08-468-671-13

  Query Match             86.5%;  Score 335.6;  DB 1;  Length 384;
  Best Local Similarity   92.4%;  Pred. No. 1.2e-92;
  Matches  353;  Conservative    0;  Mismatches   29;  Indels    0;  Gaps    0;

Qy          7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
              |||| |  | ||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAGGCCCGTCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy         67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db         61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTGGGAGACAGAGTCACC 120

Qy        127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
              |||||||||||||||||||| ||||||||| |||||||||||||||||||| ||||||
Db        121 GTCACTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy        187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
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Db        181 GGGAAAGCCCCTAAACTCCTGATCCATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 240

Qy        247 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
                ||||||| |||||||||||||||||||||||||||||||||||| |||||||||| ||
Db        241 AGGTTCATCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCACCAGCCTGCAGGCT 300

Qy        307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
                |||||||||||||| |||||||||||||||||| | ||| |||| |  ||||| |||
Db        301 GAAGATTTTGCAACCTACTATTGTCAACAGGCTGACAGTCTCCCTTTTACTTTCGGCGGA 360

Qy        367 GGGACCAAGCTGGAGATCAAAC 388
                ||||||||| ||||  ||||||
Db        361 GGGACCAAGGTGGACTTCAAAC 382
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RESULT 11
US-08-646-367-2
; Sequence 2, Application US/08646367
; Patent No. 5959085
;  GENERAL INFORMATION:
;    APPLICANT:  Pierre Garrone
;    APPLICANT:  Odile Djossou
;    APPLICANT:  Francois Fossiez
;    APPLICANT:  Jacques Banchereau
;    TITLE OF INVENTION:  Human Monoclonal Antibodies
;    TITLE OF INVENTION:  Against Human Cytokines And
;    TITLE OF INVENTION:  Methods Of Making And Using Such Antibodies
;    NUMBER OF SEQUENCES:  30
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Schering-Plough Corporation
;      STREET:  2000 Galloping Hill Road
;      CITY:  Kenilworth
;      STATE:  New Jersey
;      COUNTRY:  USA
;      ZIP:  07033
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  Apple Macintosh
;      OPERATING SYSTEM:  Macintosh 7.5.3
;      SOFTWARE:  Microsoft Word 5.1a
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/646,367
;      FILING DATE:  May 16, 1996
;      CLASSIFICATION:  530
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Foulke, Cynthia L.
;      REGISTRATION NUMBER:  32,364
;      REFERENCE/DOCKET NUMBER:  SF0403K
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-298-2987
;      TELEFAX:  908-298-5388
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  390 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
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; TOPOLOGY: linear
US-08-646-367-2

Query Match 86.4%; Score 335.2; DB 2; Length 390;
Best Local Similarity 91.5%; Pred. No. 1.6e-92;
Matches 355; Conservative 0; Mismatches 33; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||  ||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| |||||||||  ||||||||||||||||||||
Db        121 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              ||||||||  ||  |||||  ||||||  |||||||||  |||||||  ||||  |||  |||||||
Db        181 AAACCAGGAAAGGCCCCGAAGCTCTTGATCTATGAAGCATCCAATTTGGAAACTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||  ||||||||||||||||||||  |||||||||  ||||||||||||||||||
Db        241 CCATCAAGATTCAGCGGCAGTGGATCTGGGTCAGATTTCACCCTCACCATCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||  ||||||||||||  |||  |||||  |    ||  |||
Db        301 CAGCCTGAAGATTTTGCAACTTATTATTGTCAACAGACTAGCAGTTTTCTCCTCAGTTTC 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db        361 GGCGGCGGGACCAAGGTGGAGCACAAAC 388
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RESULT 12
US-09-472-087-62
; Sequence 62, Application US/09472087
; Patent No. 6682736
; GENERAL INFORMATION:
; APPLICANT: HANSON, DOUGLAS C.
; APPLICANT: NEVEU, MARK J.
; APPLICANT: MUELLER, EILLEN E.
; APPLICANT: HANKE, JEFFREY H.
; APPLICANT: GILMAN, STEVEN C.
; APPLICANT: DAVIS, C. GEOFFREY
; APPLICANT: CORVALAN, JOSE R.
; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODIES TO CTLA-4
; FILE REFERENCE: ABX-PF1
; CURRENT APPLICATION NUMBER: US/09/472,087
; CURRENT FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: 60/113,647
; PRIOR FILING DATE: 1998-12-23
; NUMBER OF SEQ ID NOS: 147
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 62

; LENGTH: 714
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-472-087-62

Query Match 83.9%; Score 325.6; DB 4; Length 714;
Best Local Similarity 89.9%; Pred. No. 1.7e-89;
Matches 349; Conservative 0; Mismatches 39; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| |||||||||||||||||||||||||||||| |||||| ||| |||| ||
Db          1 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAGGTGCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||| |||||||||||||||||||||||| ||| ||||||||||||||||||||||||
Db         61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTAGGAGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||| ||||| ||||||   |||| |||||  ||||  ||||||||||||
Db        121 GTCACCATCACTTGCCGGGCAAGTCAGAGCATTAACAGCTATTTAGATTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db        181 AAACCAGGGAAAGCCCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||| ||||||||||||||||||||||||||||||||||||||||| |||
Db        241 CCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGTCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              || |||||||||||||||||||||| ||||||||  | | |||   || | ||||||
Db        301 CAACCTGAAGATTTTGCAACTTACTACTGTCAACAGTATTACAGTACTCCATTCACTTTC 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||  ||||||||  |||| |||||||
Db        361 GGCCCTGGGACCAAAGTGGAAATCAAAC 388
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RESULT 13
US-08-157-101A-4
; Sequence 4, Application US/08157101A
; Patent No. 5808032
; GENERAL INFORMATION:
;   APPLICANT: KURIHARA, TATSUYA
;   APPLICANT: MATSUKURA, SHIGEKAZU
;   APPLICANT: TSURUOKA, NOBUO
;   APPLICANT: ARIMA, KENJI
;   APPLICANT: NISHIHARA, TATSURO
;   TITLE OF INVENTION: ANTI-HBs ANTIBODY GENES AND EXPRESSION
;   TITLE OF INVENTION: PLASMIDS THEREFOR
;   NUMBER OF SEQUENCES: 9
;   CORRESPONDENCE ADDRESS:
;   ADDRESSEE: PILLSBURY, MADISON & SUTRO
;   STREET: 1100 NEW YORK AVENUE, N.W.
;   CITY: WASHINGTON
;   STATE: D.C.
;   COUNTRY: USA

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;       ZIP:  20005
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/157,101A
;       FILING DATE:  05-APR-1994
;       CLASSIFICATION:  530
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  TITUS, MARLANA K
;       REGISTRATION NUMBER:  35843
;       REFERENCE/DOCKET NUMBER:  9437/204199
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  202-861-3711
;       TELEFAX:  202-822-0944
;       TELEX:  6714627 CUCH
;   INFORMATION FOR SEQ ID NO:  4:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  1066 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
US-08-157-101A-4

  Query Match             83.5%;  Score 324;  DB 1;  Length 1066;
  Best Local Similarity   89.7%;  Pred. No. 5.9e-89;
  Matches  348;  Conservative    0;  Mismatches   40;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db         33 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTGCC 92

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              || || |||||||||||||||||||||||||| || || ||||||||||||||||||||
Db         93 AGGTGTGACATCCAGATGACCCAGTCTCCATCTGCCATGGCTGCATCTGTAGGAGACAGA 152

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||||  ||| |||  |  |||| ||||| ||||||
Db        153 GTCACCATCACTTGTCGGGCGAGTCAGGGCATTGGCAATTATTTAGTCTGGTTTCAGCAG 212

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||| |||||||| ||||||||||||||||||||||||||||||||||||
Db        213 AAACCAGGGAAAGTCCCTAAGCGCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 272

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||| |||||||||||||||||||||||||| |||||||||| |||||||| |||
Db        273 CCATCGAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACAATCAGCAGACTG 332

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||| || |||| |||   ||||| || ||||   | |||
Db        333 CAGCCTGAAGATTTTGCAACTTATTACTGTCTACATCATAATAATTACCCGCTAAGTTTC 392

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              |||   ||||||||| ||||||||||||
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Db        393 GGCGGAGGGACCAAGGTGGAGATCAAAC 420
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RESULT 14
US-09-343-485A-3
; Sequence 3, Application US/09343485A
; Patent No. 6413777
; GENERAL INFORMATION:
; APPLICANT: REFF, MITCHELL R.
; APPLICANT: BARNETT, RICHARD S.
; APPLICANT: MCLACHLAN, KAREN R.
; TITLE OF INVENTION: NOVEL METHOD FOR INTEGRATING GENES AT SPECIFIC SITES IN
; TITLE OF INVENTION: MAMMALIAN CELLS VIA HOMOLOGOUS RECOMBINATION AND
; TITLE OF INVENTION: VECTORS FOR ACCOMPLISHING THE SAME
; FILE REFERENCE: 037003-0275807
; CURRENT APPLICATION NUMBER: US/09/343,485A
; CURRENT FILING DATE: 1999-06-30
; PRIOR APPLICATION NUMBER: 09/023,715
; PRIOR FILING DATE: 1998-02-13
; PRIOR APPLICATION NUMBER: 08/819,866
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
;   LENGTH: 19040
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
;   OTHER INFORMATION: referred to as "Mandy"
US-09-343-485A-3

  Query Match   82.3%; Score 319.2; DB 4; Length 19040;
  Best Local Similarity   88.9%; Pred. No. 4.8e-87;
  Matches 345; Conservative   0; Mismatches   43; Indels   0; Gaps   0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Db       7605 AGATGTGACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGTAGGGGACAGA 7664

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Db       7665 GTCACCATCACTTGCAGGGCAAGTCAGGACATTAGGTATTATTTAAATTGGTATCAGCAG 7724

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Db       7725 AAACCAGGAAAAGCTCCTAAGCTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 7784

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||||||||||||||||||||||| |||||||||||| ||||||||||
Db       7785 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAGTTCACTCTCACCGTCAGCAGCCTG 7844

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db       7845 CAGCCTGAAGATTTTGCGACTTATTACTGTCTACAGGTTTATAGTACCCCTCGGACGTTC 7904

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
                ||||| ||||||||| |||| |||||||
Db       7905 GGCCAAGGGACCAAGGTGGAAATCAAAC 7932


RESULT 15
US-08-803-085-3
; Sequence 3, Application US/08803085
; Patent No. 6011138
;  GENERAL INFORMATION:
;    APPLICANT:  REFF, Mitchell E.
;    APPLICANT:  KLOETZER, William S.
;    APPLICANT:  NAKAMURA, Takehiko
;    TITLE OF INVENTION:  GAMMA-1 ANTI-HUMAN CD23 MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES AND USE THEREOF AS THERAPEUTICS
;    NUMBER OF SEQUENCES:  35
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  P.O. Box 1404
;      CITY:  Alexandria
;      STATE:  Virginia
;      COUNTRY:  United States
;      ZIP:  22313-1404
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/803,085
;      FILING DATE:  20-FEB-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin, Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-353
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 836-6620
;      TELEFAX:  (703) 836-2021
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  387 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..387
;    FEATURE:
;      NAME/KEY:  mat_peptide
;      LOCATION:  67..387
US-08-803-085-3
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Query Match 82.0%; Score 318.2; DB 3; Length 387;
Best Local Similarity 88.9%; Pred. No. 2.4e-87;
Matches 344; Conservative 0; Mismatches 43; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db          1 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTTCTGCTCTGGCTCCCAGGTGCC 60

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||| |||||||||||||||||||||||||||| |||||||||||||| ||||||
Db         61 AGATGTGACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGTAGGGGACAGA 120

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              ||||||||||||||  |||| |||||||| |||||    |  |||   ||||||||||
Db        121 GTCACCATCACTTGCAGGGCAAGTCAGGACATTAGGTATTATTTAAATTGGTATCAGCAG 180

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Db        181 AAACCAGGAAAAGCTCCTAAGCTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||||||||||||||||||||||| |||||||||| |||||||||
Db        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAGTTCACTCTCACCGTCAGCAGCCTG 300

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||| ||||| || |||| ||||| | |||||  |||    || ||
Db        301 CAGCCTGAAGATTTTGCGACTTATTACTGTCTACAGGTTTATAGTACCCCTCGGACGTTC 360

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAA 387
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Db        361 GGCCAAGGGACCAAGGTGGAAATCAAA 387
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Job time : 58.6692 secs

GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 17:01:26 ; Search time 297.477 Seconds
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Sequence: 1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

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Maximum Match 100%
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
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	2	364	93.8	974	17	US-10-625-105-29	Sequence 29, Appl
	3	362.4	93.4	728	9	US-09-844-684-15	Sequence 15, Appl
	4	362.4	93.4	728	14	US-10-040-244-15	Sequence 15, Appl
	5	362.4	93.4	728	17	US-10-693-629-65	Sequence 65, Appl
	6	359.2	92.6	716	9	US-09-844-684-13	Sequence 13, Appl
	7	359.2	92.6	716	14	US-10-040-244-13	Sequence 13, Appl
	8	350	90.2	752	17	US-10-684-109-83	Sequence 83, Appl
C	9	350	90.2	752	17	US-10-684-109-84	Sequence 84, Appl
	10	348.4	89.8	705	15	US-10-292-088-23	Sequence 23, Appl
	11	348.4	89.8	705	15	US-10-292-088-47	Sequence 47, Appl
	12	338.8	87.3	381	16	US-10-309-762-111	Sequence 111, App
	13	338.4	87.2	390	9	US-09-905-243-57	Sequence 57, Appl
	14	335.6	86.5	384	15	US-10-389-221-10	Sequence 10, Appl
	15	333.6	86.0	426	16	US-10-469-304-22	Sequence 22, Appl
	16	332	85.6	1106	16	US-10-264-049-121	Sequence 121, App
	17	331.6	85.5	387	9	US-09-905-243-25	Sequence 25, Appl
	18	330.8	85.3	702	17	US-10-684-109-89	Sequence 89, Appl

c	19	330.8	85.3	702	17	US-10-684-109-90	Sequence 90, Appl
	20	330.8	85.3	702	17	US-10-684-109-107	Sequence 107, App
c	21	330.8	85.3	702	17	US-10-684-109-108	Sequence 108, App
	22	330.2	85.1	463	16	US-10-395-894-24	Sequence 24, Appl
	23	330.2	85.1	463	17	US-10-695-667-24	Sequence 24, Appl
	24	330.2	85.1	6082	16	US-10-395-894-10	Sequence 10, Appl
	25	330.2	85.1	6082	17	US-10-695-667-10	Sequence 10, Appl
	26	325.6	83.9	714	14	US-10-153-382-18	Sequence 18, Appl
	27	325.6	83.9	714	18	US-10-612-497-62	Sequence 62, Appl
	28	325.6	83.9	714	18	US-10-776-649-62	Sequence 62, Appl
	29	325.6	83.9	729	15	US-10-216-484-125	Sequence 125, App
	30	325.6	83.9	729	15	US-10-384-933-125	Sequence 125, App
	31	324.4	83.6	702	17	US-10-684-109-101	Sequence 101, App
c	32	324.4	83.6	702	17	US-10-684-109-102	Sequence 102, App
	33	323.8	83.5	463	16	US-10-395-894-20	Sequence 20, Appl
	34	323.8	83.5	463	17	US-10-695-667-20	Sequence 20, Appl
	35	323.8	83.5	6082	16	US-10-395-894-9	Sequence 9, Appli
	36	323.8	83.5	6082	17	US-10-695-667-9	Sequence 9, Appli
	37	321.4	82.8	772	16	US-10-264-049-2127	Sequence 2127, Ap
	38	321.2	82.8	702	17	US-10-684-109-95	Sequence 95, Appl
c	39	321.2	82.8	702	17	US-10-684-109-96	Sequence 96, Appl
	40	321.2	82.8	702	17	US-10-684-109-113	Sequence 113, App
c	41	321.2	82.8	702	17	US-10-684-109-114	Sequence 114, App
	42	320.8	82.7	698	9	US-09-844-684-11	Sequence 11, Appl
	43	320.8	82.7	698	14	US-10-040-244-11	Sequence 11, Appl
	44	320.8	82.7	698	17	US-10-693-629-61	Sequence 61, Appl
	45	319.4	82.3	402	14	US-10-158-646-56	Sequence 56, Appl

ALIGNMENTS

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RESULT 1
US-09-859-053-29
; Sequence 29, Application US/09859053
; Patent No. US20020102658A1
; GENERAL INFORMATION:
;  APPLICANT: Tsuji, Takashi
;  APPLICANT:  Tezuka, Katsunari
;  APPLICANT:  Hori, No. US20020102658A1uaki
;  TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A
;  TITLE OF INVENTION:  COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND
;  TITLE OF INVENTION:  PHARMACEUTICAL USE THEREOF
;  FILE REFERENCE: 06501-079001
;  CURRENT APPLICATION NUMBER: US/09/859,053
;  CURRENT FILING DATE:  2001-05-16
;  PRIOR APPLICATION NUMBER: JP 2001-99508
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: JP 2000-147116
;  PRIOR FILING DATE: 2000-05-18
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 29
;   LENGTH: 974
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
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;   NAME/KEY: 5'UTR
;   LOCATION: (1)...(38)
;   NAME/KEY: CDS
;   LOCATION: (39)...(746)
;   NAME/KEY: 3'UTR
;   LOCATION: (750)...(974)
;   NAME/KEY: sig_peptide
;   LOCATION: (39)...(104)
US-09-859-053-29

  Query Match             93.8%;  Score 364;  DB 9;  Length 974;
  Best Local Similarity   96.1%;  Pred. No. 6e-105;
  Matches  373;  Conservative    0;  Mismatches   15;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db         39 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 98

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Db         99 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 158

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||| | ||||||||||||||||||
Db        159 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAG 218

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||| |||||||||||| ||||||||||||||||||||||||
Db        219 AAACCAGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 278

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        279 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 338

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||| |||||||||  || ||
Db        339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTC 398

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| |||| |||||||
Db        399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426


RESULT 2
US-10-625-105-29
; Sequence 29, Application US/10625105
; Publication No. US20040180052A1
; GENERAL INFORMATION:
;  APPLICANT: Tsuji, Takashi
;  APPLICANT:  Tezuka, Katsunari
;  APPLICANT:  Hori, Nobuaki
;  TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A
;  TITLE OF INVENTION:  COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND
;  TITLE OF INVENTION:  PHARMACEUTICAL USE THEREOF
;  FILE REFERENCE: 06501-079001
;  CURRENT APPLICATION NUMBER: US/10/625,105
;  CURRENT FILING DATE:  2003-07-22
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;  PRIOR APPLICATION NUMBER: US/09/859,053
;  PRIOR FILING DATE: 2001-05-16
;  PRIOR APPLICATION NUMBER: JP 2001-99508
;  PRIOR FILING DATE: 2001-03-30
;  PRIOR APPLICATION NUMBER: JP 2000-147116
;  PRIOR FILING DATE: 2000-05-18
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 29
;   LENGTH: 974
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: 5'UTR
;   LOCATION: (1)...(38)
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (39)...(746)
;   FEATURE:
;   NAME/KEY: 3'UTR
;   LOCATION: (750)...(974)
;   FEATURE:
;   NAME/KEY: sig_peptide
;   LOCATION: (39)...(104)
US-10-625-105-29

  Query Match             93.8%;  Score 364;  DB 17;  Length 974;
  Best Local Similarity   96.1%;  Pred. No. 6e-105;
  Matches  373;  Conservative    0;  Mismatches   15;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db         39 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 98

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         99 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 158

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||| | ||||||||||||||||||
Db        159 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAG 218

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||| |||||||||||| |||||||||||||||||||||||||
Db        219 AAACCAGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 278

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        279 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 338

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||||||| |||||||||  || ||
Db        339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTC 398

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| |||| |||||||
Db        399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426
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RESULT 3
US-09-844-684-15
; Sequence 15, Application US/09844684
; Patent No. US20020142358A1
; GENERAL INFORMATION:
; APPLICANT: GEMINI SCIENCE, INC.
; APPLICANT: LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY
; TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME
; FILE REFERENCE: 21286/0276339
; CURRENT APPLICATION NUMBER: US/09/844,684
; CURRENT FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: US 60/200,601
; PRIOR FILING DATE: 2000-04-28
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 15
; LENGTH: 728
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-844-684-15

Query Match 93.4%; Score 362.4; DB 9; Length 728;
Best Local Similarity 95.9%; Pred. No. 1.8e-104;
Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db         59 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 118

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              |||||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db        119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| |||||||||||||||||||||||||||||||||
Db        179 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||||||||||||||||||||||||| ||||||||||||||||||||
Db        239 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||||||||||||| ||||||||||||||||||||||||||||||||||||
Db        299 CCATCAAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||||||||||  ||||||||    || ||
Db        359 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| ||||||||||||
Db        419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446
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RESULT 4

US-10-040-244-15
; Sequence 15, Application US/10040244
; Publication No. US20030059427A1
; GENERAL INFORMATION:
; APPLICANT: KIRIN BEER KABUSHIKI KAISHA
; APPLICANT: FORCE, WALKER F.
; APPLICANT: TAKAHASHI, NOBUAKI
; APPLICANT: MIKAYAMA, TOSHIFUMI
; TITLE OF INVENTION: ISOLATION AND CHARACTERIZATION OF HIGHLY ACTIVE ANTI-CD40 ANTIBODY
; FILE REFERENCE: 021286/0272501
; CURRENT APPLICATION NUMBER: US/10/040,244
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: 60/200,601
; PRIOR FILING DATE: 2000-4-28
; PRIOR APPLICATION NUMBER: PCT/US01/13672
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: 09/844,684
; PRIOR FILING DATE: 2001-04-27
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 3.0
; SEQ ID NO 15
; LENGTH: 728
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-040-244-15

Query Match 93.4%; Score 362.4; DB 14; Length 728;
Best Local Similarity 95.9%; Pred. No. 1.8e-104;
Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              ||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||
Db         59 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 118

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Db        119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        179 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Db        239 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Db        299 CCATCAAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||||||||  ||||||||    || ||
Db        359 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db        419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446


RESULT 5
US-10-693-629-65
; Sequence 65, Application US/10693629
; Publication No. US20040120948A1
; GENERAL INFORMATION:
;  APPLICANT: KIRIN BEER KABUSHIKI KAISHA
;  APPLICANT:  MIKAYAMA, Toshifumi
;  APPLICANT:  YOSHIDA, Hitoshi
;  APPLICANT:  FORCE, Walker, R.
;  APPLICANT:  CHEN, Xingjie
;  APPLICANT:  TAKAHASHI, Nobuaki
;  TITLE OF INVENTION: ANTI CD40 MONOCLONAL ANTIBODY
;  FILE REFERENCE: 021286-0306473
;  CURRENT APPLICATION NUMBER: US/10/693,629
;  CURRENT FILING DATE:  2003-11-13
;  PRIOR APPLICATION NUMBER: PCT/US01/13672
;  PRIOR FILING DATE: 2001-04-27
;  PRIOR APPLICATION NUMBER: US09/844,684
;  PRIOR FILING DATE: 2001-04-27
;  PRIOR APPLICATION NUMBER: JP2001/142482
;  PRIOR FILING DATE: 2001-05-11
;  PRIOR APPLICATION NUMBER: JP2001/310535
;  PRIOR FILING DATE: 2001-10-05
;  PRIOR APPLICATION NUMBER: US10/040,244
;  PRIOR FILING DATE: 2001-10-26
;  NUMBER OF SEQ ID NOS: 66
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 65
;   LENGTH: 728
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-693-629-65

  Query Match             93.4%;  Score 362.4;  DB 17;  Length 728;
  Best Local Similarity   95.9%;  Pred. No. 1.8e-104;
  Matches  372;  Conservative    0;  Mismatches   16;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db         59 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 118

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db        119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db        179 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db        239 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Db        299 CCATCAAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
                    |||||||||||||||||||||||||||||||||||||||  |||||||    || ||
Db        359 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
                    ||||| ||||||||| ||||||||||||
Db        419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446


RESULT 6
US-09-844-684-13
; Sequence 13, Application US/09844684
; Patent No. US20020142358A1
; GENERAL INFORMATION:
;  APPLICANT: GEMINI SCIENCE, INC.
;  APPLICANT:  LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY
;  TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME
;  FILE REFERENCE: 21286/0276339
;  CURRENT APPLICATION NUMBER: US/09/844,684
;  CURRENT FILING DATE:  2001-04-27
;  PRIOR APPLICATION NUMBER: US 60/200,601
;  PRIOR FILING DATE: 2000-04-28
;  NUMBER OF SEQ ID NOS: 15
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
;   LENGTH: 716
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-844-684-13

  Query Match             92.6%;  Score 359.2;  DB 9;  Length 716;
  Best Local Similarity   95.4%;  Pred. No. 1.9e-103;
  Matches  370;  Conservative    0;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db         47 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 106

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              |||||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        107 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGCAGGAGACAGA 166

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| |||||||||||||||||||||||||||||| ||
Db        167 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAACAG 226

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db        227 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 286

Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||||||||||||| |||||||||||||||||||||||| ||||||||
Db        287 CCATCAAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCGGCAGCCTG 346
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Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              ||||||||||||||||||||||||||||||||||||||||  ||||||||    || ||
Db        347 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACGTTC 406

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              |||||  ||||||||| ||||||||||||
Db        407 GGCCAAGGGACCAAGGTGGAGATCAAAC 434
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RESULT 7
US-10-040-244-13
; Sequence 13, Application US/10040244
; Publication No. US20030059427A1
; GENERAL INFORMATION:
; APPLICANT: KIRIN BEER KABUSHIKI KAISHA
; APPLICANT: FORCE, WALKER F.
; APPLICANT: TAKAHASHI, NOBUAKI
; APPLICANT: MIKAYAMA, TOSHIFUMI
; TITLE OF INVENTION: ISOLATION AND CHARACTERIZATION OF HIGHLY ACTIVE ANTI-CD40
ANTIBODY
; FILE REFERENCE: 021286/0272501
; CURRENT APPLICATION NUMBER: US/10/040,244
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: 60/200,601
; PRIOR FILING DATE: 2000-4-28
; PRIOR APPLICATION NUMBER: PCT/US01/13672
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: 09/844,684
; PRIOR FILING DATE: 2001-04-27
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 3.0
; SEQ ID NO 13
; LENGTH: 716
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-040-244-13

Query Match 92.6%; Score 359.2; DB 14; Length 716;
Best Local Similarity 95.4%; Pred. No. 1.9e-103;
Matches 370; Conservative 0; Mismatches 18; Indels 0; Gaps 0;

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Qy          1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db         47 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 106

Qy         61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
              |||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        107 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGCAGGAGACAGA 166

Qy        121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
              |||||||||||||||||||||||||| |||||||||||||||||||||||||||||| ||
Db        167 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAACAG 226

Qy        181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db        227 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 286
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Qy        241 CCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
              |||||||||||||||||||||||| |||||||||||||||||||||||| ||||||||
Db        287 CCATCAAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCGGCAGCCTG 346

Qy        301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
              |||||||||||||||||||||||||||||||||||||||| ||||||||    || ||
Db        347 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACGTTC 406

Qy        361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
              ||||| ||||||||| ||||||||||||
Db        407 GGCCAAGGGACCAAGGTGGAGATCAAAC 434
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```
RESULT 8
US-10-684-109-83
; Sequence 83, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
;  APPLICANT: DeVries, Peter J.
;  APPLICANT:  Green, Larry L.
;  APPLICANT:  Ostrow, David H.
;  APPLICANT:  Reilly, Edward B.
;  APPLICANT:  Wieler, James
;  TITLE OF INVENTION: Erythropoietin Receptor Binding
;  TITLE OF INVENTION:  Antibodies
;  FILE REFERENCE: 6989.US.02
;  CURRENT APPLICATION NUMBER: US/10/684,109
;  CURRENT FILING DATE:  2003-10-10
;  PRIOR APPLICATION NUMBER: 10/269,711
;  PRIOR FILING DATE: 2002-10-14
;  NUMBER OF SEQ ID NOS: 115
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 83
;   LENGTH: 752
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-684-109-83

  Query Match             90.2%;  Score 350;  DB 17;  Length 752;
  Best Local Similarity   94.8%;  Pred. No. 1.5e-100;
  Matches  362;  Conservative    0;  Mismatches   20;  Indels    0;  Gaps    0;

Qy          7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
              |||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy         67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
              |||||||||||||||| |||||||||||||||||||||| |||||||||||||| ||
Db         61 GACATCCAGATGACCCAATCTCCATCTTCCGTGTCTGCATCTATAGGAGACAGAGTCTCC 120

Qy        127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
              |||||||||||||||||||| |||||||||||||||||||||||| ||||||
Db        121 ATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy        187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
              |||||||||||| |||||| |||||||||||||| ||||||| ||||||||||||||
Db        181 GGGAAAGCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 240
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Qy        247 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300

Qy        307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
              |||||||||||||||||||| |||||||||||||||| |||||||| | |||||| ||||
Db        301 GAAGATTTTGCAACTTACTTTTGTCAACAGGCTAACAGTTTCCCATTCACTTTCGGCCCT 360

Qy        367 GGGACCAAGCTGGAGATCAAAC 388
              ||||||||  |||| |||||||
Db        361 GGGACCAAAGTGGATATCAAAC 382
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RESULT 9
US-10-684-109-84/c
; Sequence 84, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
; APPLICANT: DeVries, Peter J.
; APPLICANT: Green, Larry L.
; APPLICANT: Ostrow, David H.
; APPLICANT: Reilly, Edward B.
; APPLICANT: Wieler, James
; TITLE OF INVENTION: Erythropoietin Receptor Binding
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: 6989.US.02
; CURRENT APPLICATION NUMBER: US/10/684,109
; CURRENT FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: 10/269,711
; PRIOR FILING DATE: 2002-10-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 84
; LENGTH: 752
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-684-109-84

Query Match 90.2%; Score 350; DB 17; Length 752;
Best Local Similarity 94.8%; Pred. No. 1.5e-100;
Matches 362; Conservative 0; Mismatches 20; Indels 0; Gaps 0;

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Qy          7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
              |||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        752 ATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 693

Qy         67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
              |||||||||||||||| |||||||||||||||||||||| |||||||||||||| ||
Db        692 GACATCCAGATGACCCAATCTCCATCTTCCGTGTCTGCATCTATAGGAGACAGAGTCTCC 633

Qy        127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
              |||||||||||||||||||| |||||||||||||||||||||||||||| ||||||
Db        632 ATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 573

Qy        187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
              |||||||||||| |||||| |||||||||||||| ||||||| ||||||||||||
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Db        572 GGGAAAGCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 513

Qy        247 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        512 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 453

Qy        307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
              |||||||||||||||||| ||||||||||||||| |||||||| | |||||| ||||
Db        452 GAAGATTTTGCAACTTACTTTTGTCAACAGGCTAACAGTTTCCCATTCACTTTCGGCCCT 393

Qy        367 GGGACCAAGCTGGAGATCAAAC 388
              ||||||||  ||||  |||||||
Db        392 GGGACCAAAGTGGATATCAAAC 371
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RESULT 10
US-10-292-088-23
; Sequence 23, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
; . APPLICANT: BEDIAN, VAHE
;  APPLICANT:  GLADUE, RONALD P.
;  APPLICANT:  CORVALAN, JOSE
;  APPLICANT:  JIA, XIAO-CHI
;  APPLICANT:  FENG, XIAO
;  TITLE OF INVENTION: ANTIBODIES TO CD40
;  FILE REFERENCE: ABX-PF/3 US
;  CURRENT APPLICATION NUMBER: US/10/292,088
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: 60/348,980
;  PRIOR FILING DATE: 2001-11-09
;  NUMBER OF SEQ ID NOS: 147
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 23
;   LENGTH: 705
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-292-088-23

  Query Match             89.8%;  Score 348.4;  DB 15;  Length 705;
  Best Local Similarity   94.5%;  Pred. No. 4.9e-100;
  Matches  361;  Conservative    0;  Mismatches   21;  Indels    0;  Gaps    0;

Qy          7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
              |||| | |||| ||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy         67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120

Qy        127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
              |||||||||||||||||||  |||||||||||||||||||||||||||| ||||||
Db        121 ATCACTTGTCGGGCGAGTCAGCCTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy        187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
              |||||||||||||| |||||||| ||| |||| ||| ||||||||||||||||||||||
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Db        181 GGGAAAGCCCCTAAACTCCTGATTTATTCTGCCTCCGGTTTGCAAAGTGGGGTCCCATCA 240

Qy        247 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300

Qy        307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
              ||||||||||||||||||||||||||||| || | |||||||||  |||||| |||
Db        301 GAAGATTTTGCAACTTACTATTGTCAACAGACTGACAGTTTCCCGCTCACTTTCGGCGGC 360

Qy        367 GGGACCAAGCTGGAGATCAAAC 388
              ||||||||| ||||||||||||
Db        361 GGGACCAAGGTGGAGATCAAAC 382
```

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RESULT 11
US-10-292-088-47
; Sequence 47, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
;  APPLICANT: BEDIAN, VAHE
;  APPLICANT:  GLADUE, RONALD P.
;  APPLICANT:  CORVALAN, JOSE
;  APPLICANT:  JIA, XIAO-CHI
;  APPLICANT:  FENG, XIAO
;  TITLE OF INVENTION: ANTIBODIES TO CD40
;  FILE REFERENCE: ABX-PF/3 US
;  CURRENT APPLICATION NUMBER: US/10/292,088
;  CURRENT FILING DATE:  2003-03-14
;  PRIOR APPLICATION NUMBER: 60/348,980
;  PRIOR FILING DATE: 2001-11-09
;  NUMBER OF SEQ ID NOS: 147
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 47
;   LENGTH: 705
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-292-088-47

  Query Match             89.8%;  Score 348.4;  DB 15;  Length 705;
  Best Local Similarity   94.5%;  Pred. No. 4.9e-100;
  Matches  361;  Conservative    0;  Mismatches   21;  Indels    0;  Gaps    0;

Qy          7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
              |||| | |||| ||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy         67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120

Qy        127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
              |||||||||||||||||||| ||||  |||||||||||||||||||||| ||||||
Db        121 ATCACTTGTCGGGCGAGTCAGGGTATTTACAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy        187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
              ||||||||||||| |||||||||| ||||||||| ||| ||||||||||||||||||
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